TRAINING CURRICULUM and LESSON PLANS

Ambulance Endorsement

Curriculum Objectives and Sample Lesson Plans for the EMT-F Ambulance Endorsement

Montana Department of Labor and Industry
Board of Medical Examiners

The purpose of the Ambulance Endorsement for EMT-F is to provide the EMT-F with the minimum knowledge and skills required to operate on an ambulance as a member of a crew.

This Lesson Plan includes the material, which the Ambulance Endorsement student will need to know in order to successfully receive the Ambulance Endorsement.

At the start of each lesson is a list of the knowledge and skill objectives that the Ambulance Endorsement student must master in order to have the knowledge and skills necessary to progress through that lesson. Following the list of objectives for the lesson is an outline of the material that must be covered in order to satisfy the objectives. It is up to the Lead Instructor to determine if review of the remaining objectives is necessary in order for the students in a particular course to have mastery of all of the objectives of the lesson.

At the end of each module is a lesson for evaluation for that module and, if there are skill objectives, a lesson entitled practical lab. The practical labs may, at the discretion of the Lead Instructor, be given at the end of each module or interspersed as each skill is learned. In some instances, material that should have been covered in a previous course has been included in the outline where it was thought necessary for review, to clarify other material, or in order to make the lesson plan “flow".

All of the material on patient assessment covered in the 1994 EMT-Basic curriculum has been included in this lesson plan. This has been done due to the major changes in assessment and the importance of the assessment to the progression of the student.

If you have any questions regarding the content or intent of the Montana Ambulance Endorsement Lesson Plan, please contact the Montana Board of Medical Examiners

FORWARD

The Montana Board of Medical Examiners (BOME) developed the EMT endorsement process to provide the local EMS medical director the ability to expand the individual EMT scope of practice. The BOME has defined the "maximum allowable" skills for each endorsement and established statewide protocols. The endorsement process consists of education and verification.

The local EMS medical director is responsible for verifying an EMT's knowledge and skills for a particular endorsement. This can be accomplished via a training program; or the medical director may take into account an EMT's previous education, skill ability or other personal knowledge to determine whether an EMT meets the endorsement knowledge and skill requirements. The local medical director is responsible for the quality of all endorsement training via direct participation and/or oversight.

The medical director cannot exceed the scope of the endorsement, but may set limits on the ambulance service or the individual EMT. As an example, the medical director might wish the local ambulance service or an individual EMT to utilize pulse oximetry but not cardiac monitoring.

The endorsement material that follows provides the knowledge and psychomotor objectives at the specific endorsement level. Some endorsements may also include sample lesson plans for use in presenting the material. The endorsements (specifically at the EMT-Intermediate and EMT-Paramedic levels) may be non-specific in certain areas (such as specific medications or routes of administration) as the Board does not intend to "practice medicine". The medical director "practices medicine" and has the ability to determine the specific's concerning the endorsement. The Board approved protocols define the extent of the local medical directors flexibility: "…*The Board authorizes the service medical director to use the Board approved protocols in their entirety or may determine to limit individual EMT providers function / practice where appropriate and in accordance with provider's abilities. However, the service medical director may not significantly alter (change the performance expectations of the EMT) or expand approved Board protocols without first seeking Board of Medical Examiners approval.*" If the medical director wishes to request the Board to "significantly alter" the protocol there is a process identified in the rules for that to occur.

The endorsement levels at the EMT-Paramedic level are slightly different then at the other levels in that all of the endorsement levels are subsets of the Critical Care endorsement. Therefore if a Critical Care endorsement is granted to an EMT-P, they have completed all of the other endorsements. This does not work in reverse though, if an EMT-P has all of the endorsement levels but Critical Care, Critical Care is not granted by default.

The endorsement process for the EMT-First Responder level is also slightly different. The local Lead Instructor is allowed to document the successful completion of the educational requirements for the EMT-F endorsements: ambulance, immobilization or EMTF-monitoring. The Lead Instructor may not take into consideration previous education or training as the local medical director is allowed when completing the individual's verification form. The Lead Instructor can only verify the individual's successful completion of the training/educational requirements. This is only allowed at the EMT-F endorsement levels of: ambulance, immobilization or EMTF-monitoring.
The Lead Instructor must remember the endorsement process is a privilege granted to a Montana licensed EMT. Endorsement education can only be offered to Montana EMT licensees; therefore, the Lead Instructor may not combine initial EMT First Responder education and an endorsement program together (such as a First Responder and ambulance endorsement). The endorsement education must be done independently of the initial program.

The endorsement process requires that the medical director complete a standardized "verification form" (certificate of completion) documenting that an individual EMT has the knowledge and skills identified at the specific endorsement level. The individual EMT then submits an application to the Board to establish the endorsement on their license. The medical director then has the option of granting permission to the individual EMT to perform the endorsement to the extent defined by the medical director. All forms and endorsement materials can be obtained from the web site; www.emt.mt.gov. Any questions or concerns can be addressed to Ken Threet at (406) 841-2359 or kthreet@mt.gov.

MODULE 1: Preparatory (Lesson 1-1)

COGNITIVE OBJECTIVES

At the completion of this lesson, the ambulance endorsement student will be able to:

1-1.1 Differentiate the roles and responsibilities of the EMT-F with ambulance endorsement from other prehospital care providers. (C-3)

1-1.2 Describe the roles and responsibilities related to personal safety. (C-1)

1-1.3 Discuss the roles and responsibilities of the EMT-F with ambulance endorsement towards the safety of the crew, the patient and bystanders. (C-1)

AFFECTIVE OBJECTIVES

At the completion of this lesson, the ambulance endorsement student will be able to:

1-1.8 Assess areas of personal attitude and conduct of the EMT-F with ambulance endorsement. (A-3)

1-1.9 Characterize the various methods used to access the EMS system in your community. (A-3**)**

PSYCHOMOTOR OBJECTIVES

No psychomotor objectives identified.

Prerequisites: CPR BLS – EMT-First Responder Course Completion

Declarative (What)

I. Course Overview
   A. Course description and expectations
   B. Review criteria for certification
      1. Successful course completion
      2. Mentally/physically meet criteria of safe and effective practice of job functions
      3. Written examination
      4. Practical examination
      5. State and local provisions
   C. Implications of Americans with Disabilities Act (ADA) - state and local policies
   D. Implications of harassment - state and local policies

STUDENT ACTIVITY

Auditory (Hear)

1. Students will hear specifically what they can expect to receive from the training program.
2. Students will hear the specific expectations of the training program.

Visual (See)

1. Students will see audio-visual aids or materials explaining the components of the health care system, EMT-F with ambulance endorsement level of care, EMT-F with ambulance endorsement roles and responsibilities, professional attributes, and certification requirements.
2. Students will receive a copy of the cognitive, affective and psychomotor objectives for the entire curriculum.
3. Students will receive the final skill evaluation instruments.

Kinesthetic (Do)

1. Students will complete the necessary course paperwork.
2. Students will indicate if they will require/request assistance during the course or certification process based on the Americans with Disabilities Act. Additionally, students will provide the necessary documentation to support the requirements/request.

INSTRUCTOR ACTIVITIES

Supervise student practice.
Reinforce student progress in cognitive, affective, and psychomotor domains.
Redirect students having difficulty with content.

MODULE 1 Preparatory (Lesson 1-2)

Baseline Vital Signs and SAMPLE History

COGNITIVE OBJECTIVES

At the completion of this lesson, the ambulance endorsement student will be able to:

1-2.1 Identify the components of vital signs. (C-1)
1-2.2 Describe the methods to obtain a breathing rate. (C-1)
1-2.3 Identify the attributes that should be obtained when assessing breathing. (C-1)
1-2.4 Differentiate between shallow, labored and noisy breathing. (C-3)
1-2.5 Describe the methods to obtain a pulse rate. (C-1)
1-2.6 Identify the information obtained when assessing a patient's pulse. (C-1)
1-2.7 Differentiate between a strong, weak, regular and irregular pulse. (C-3)
1-2.8 Describe the methods to assess the skin color, temperature, condition (capillary refill in infants and children). (C-1)
1-2.9 Identify the normal and abnormal skin colors. (C-1)
1-2.9.1 Differentiate between pale, blue, red and yellow skin color. (C-3)
1-2.10 Identify the normal and abnormal skin temperature. (C-1)
1-2.11 Differentiate between hot, cool and cold skin temperature. (C-3)
1-2.12 Identify normal and abnormal skin conditions. (C-1)
1-2.13 Identify normal and abnormal capillary refill in infants and children. (C-1)
1-2.14 Describe the methods to assess the pupils. (C-1)
1-2.15 Identify normal and abnormal pupil size. (C-1)
1-2.16 Differentiate between dilated (big) and constricted (small) pupil size. (C-3)
1-2.17 Differentiate between reactive and non-reactive pupils and equal and unequal pupils. (C-3)
1-2.19 Describe the methods to assess blood pressure. (C-1)
1-2.20 Define systolic pressure. (C-1)
1-2.21 Define diastolic pressure. (C-1)
1-2.22 Explain the difference between auscultation and palpation for obtaining a blood pressure. (C-1)
1-2.23 Identify the components of the SAMPLE history. (C-1)
1-2.24 Differentiate between a sign and a symptom. (C-3)
1-2.25 State the importance of accurately reporting and recording the baseline vital signs.(C-1)
1-2.26 Discuss the need to search for additional medical identification. (C-1)

AFFECTIVE OBJECTIVES

At the completion of this lesson, the ambulance endorsement student will be able to:

1-2.27 Explain the value of performing the baseline vital signs. (A-2)
1-2.28 Recognize and respond to the feelings patients experience during assessment. (A-1)
1-2.29 Defend the need for obtaining and recording an accurate set of vital signs. (A-3)
1-2.30 Explain the rationale of recording additional sets of vital signs. (A-1)
1-2.31 Explain the importance of obtaining a SAMPLE history. (A-1)

PSYCHOMOTOR OBJECTIVES

At the completion of this lesson, the ambulance endorsement student will be able to:

1-2.32 Demonstrate the skills involved in assessment of breathing. (P-1, 2)
1-2.33 Demonstrate the skills associated with obtaining a pulse. (P-1, 2)
1-2.34 Demonstrate the skills associated with assessing the skin color, temperature, condition, and capillary refill in infants and children. (P-1, 2)
1-2.35 Demonstrate the skills associated with assessing the pupils. (P-1, 2)
1-2.36 Demonstrate the skills associated with obtaining blood pressure. (P-1,2)
1-2.37 Demonstrate the skills that should be used to obtain information from the patient, family, or bystanders at the scene. (P-1, 2)

Declarative (What)

I. General Information
   A. Chief complaint - why EMS was notified
   B. Age - years, months, and days
   C. Sex - male or female
   D. Race
II. Baseline Vital Signs
   A. Breathing - assessed by observing the patient's chest rise and fall.
      1. Rate is determined by counting the number of breaths in a 30-second period and multiplying by 2. Care should be taken not to inform the patient, to avoid influencing the rate.
      2. Quality of breathing can be determined while assessing the rate. Quality can be placed in 1 of 4 categories:
         a. Normal - average chest wall motion, not using accessory muscles.
         b. Shallow - slight chest or abdominal wall motion.
         c. Labored
            (1) An increase in the effort of breathing
            (2) Grunting and stridor
            (3) Often characterized by the use of accessory muscles
            (4) Nasal flaring, supraclavicular and intercostal retractions in infants and children
            (5) Sometimes gasping
         d. Noisy - an increase in the audible sound of breathing. May include snoring, wheezing, gurgling, crowing.
   B. Pulse
      1. Initially a radial pulse should be assessed in all patients one year or older. In patients less than one year of age a brachial pulse should be assessed.
      2. If the pulse is present, assess rate and quality.
         a. Rate is the number of beats felt in 30 seconds multiplied by 2.
         b. Quality of the pulse can be characterized as:
            (1) Strong
            (2) Weak
            (3) Regular
            (4) Irregular
      3. If peripheral pulse is not palpable, assess carotid pulse.
         a. Use caution. Avoid excess pressure on geriatrics.
         b. Never attempt to assess carotid pulse on both sides at one time.

C. Assess skin to determine perfusion.
   1. The patient's color should be assessed in the nail beds, oral mucosa, and conjunctiva.
      a. In infants and children, palms of hands and soles of feet should be assessed.
      b. Normal skin - pink
      c. Abnormal skin colors
         (1) Pale - indicating poor perfusion (impaired blood flow)
         (2) Cyanotic (blue-gray) - indicating inadequate oxygenation or poor perfusion
         (3) Flushed (red) - indicating exposure to heat or carbon monoxide poisoning.
         (4) Jaundice (yellow) - indicating liver abnormalities
   2. The patient's temperature should be assessed by placing the back of your hand on the patient's skin.
      a. Normal - warm
      b. Abnormal skin temperatures
         (1) Hot - indicating fever or an exposure to heat.
         (2) Cool - indicating poor perfusion or exposure to cold.
         (3) Cold - indicates extreme exposure to cold.
   3. Assess the condition of the patient's skin.
      a. Normal - dry
      b. Abnormal - skin is wet, moist, or dry.
   4. Assess capillary refill in infants and children less than six years of age.
      a. Capillary refill in infants and children is assessed by pressing on the patient's skin or nail beds and determining time for return to initial color.
      b. Normal capillary refill in infants and children is < 2 seconds.
      c. Abnormal capillary refill in infants and children is > 2 seconds.

D. Pupils are assessed by briefly shining a light into the patient's eyes, and determining size and reactivity.
   1. Dilated (very big), normal, or constricted (small).
   2. Equal or unequal
   3. Reactivity is whether or not the pupils change in response to the light.
      a. Reactive - change when exposed to light
      b. Non-reactive - do not change when exposed to light
      c. Equally or unequally reactive

E. Blood pressure
   1. Assess systolic and diastolic pressures.
      a. Systolic blood pressure is the first distinct sound of blood flowing through the artery as the pressure in the blood pressure cuff is released. This is a measurement of the pressure exerted against the walls of the arteries during contraction of the heart.
      b. Diastolic blood pressure is the point during deflation of the blood pressure cuff at which sounds of the pulse beat disappear. It represents the pressure exerted against the walls of the arteries while the left ventricle is at rest.
      c. There are two methods of obtaining blood pressure.
         (i) Auscultation: In this case the EMT-F with an ambulance endorsement will listen for the systolic and diastolic sounds.
         (ii) Palpation: In certain situations, the systolic blood pressure may be measured by feeling for return of pulse with deflation of the cuff.
   2. Blood pressure should be measured in all patients older than 3 years of age.
   3. The general assessment of the infant or child patient, such as sick appearing, in respiratory distress, or unresponsive, is more valuable than vital sign numbers.

F. Vital sign reassessment
    1. Vital signs should be assessed and recorded every 15 minutes at a minimum in a stable patient.
    2. Vital signs should be assessed and recorded every 5 minutes in the unstable patient.
    3. Vital signs should be assessed following all medical interventions.

III. Obtain a SAMPLE history.
A. Signs/Symptoms
    1. Sign - any medical or trauma condition displayed by the patient and identifiable by the Ambulance Endorsement, e.g., Hearing = respiratory distress, Seeing = bleeding, Feeling = skin temperature.
    2. Symptom - any condition described by the patient, e.g., shortness of breath.
B. Allergies
    1. Medications
    2. Food
    3. Environmental allergies
    4. Consider medical identification tag
C. Medications
    1. Prescription
        a. Current
        b. Recent
        c. Birth control pills
            (1) Non-prescription
        c. Current
        d. Recent
            (1) Consider medical identification tag
D. Pertinent Past History
    1. Medical
    2. Surgical
    3. Trauma
    4. Consider medical identification tag
E. Last oral intake: Solid or liquid
    1. Time
    2. Quantity
F. Events leading to the injury or illness
    1. Chest pain with exertion
    2. Chest pain while at rest

MODULE 1 Preparatory (Lesson 1-3)

Lifting and Moving Patients

COGNITIVE OBJECTIVES

At the completion of this lesson, the ambulance endorsement student will be able to:

1-3.1 Describe the safe lifting of cots and stretchers. (C-1)

1-3.2 Describe the guidelines and safety precautions for carrying patients and/or equipment. (C-1)

1-3.3 Discuss one-handed carrying techniques. (C-1)

1-3.4 Describe correct and safe carrying procedures on stairs. (C-1)

1-3.5 State the guidelines for reaching and their application. (C-1)

1-3.6 Describe correct reaching for log rolls. (C-1)

1-3.7 State the guidelines for pushing and pulling. (C-1)

1-3.8 Discuss the general considerations of moving patients. (C-1)

1-3.9 Identify the following patient carrying devices:

- □ Wheeled ambulance stretcher
- □ Portable ambulance stretcher
- □ Stair chair
- □ Scoop stretcher
- □ Long spine board
- □ Basket stretcher
- □ Flexible stretcher (C-1)

PSYCHOMOTOR OBJECTIVES

1-3.10 Working with a partner, prepare each of the following devices for use, transfer a patient to the device, properly position the patient on the device, move the device to the ambulance and load the patient into the ambulance:

- □ Wheeled ambulance stretcher
- □ Portable ambulance stretcher
- □ Stair chair
- □ Scoop stretcher
- □ Long spine board
- □ Basket stretcher
- □ Flexible stretcher (P-1, 2)

1-3.11 Working with a partner, the EMT-F with ambulance endorsement will demonstrate techniques for the transfer of a patient from an ambulance stretcher to a hospital stretcher. (P-1,2)

Declarative (What)

I. Principles of Lifting and Carrying

A. Lifting techniques

1. Safe lifting of cots and stretchers. When possible use a stair chair instead of a stretcher if medically appropriate.

a. Know or find out the weight to be lifted.
b. Use at least two people.
c. Ensure enough help available. Use an even number of people to lift so that balance is maintained.
   (i) Know or find out the weight limitations of equipment being used.
   (ii) Know what to do with patients who exceed weight limitations of equipment.
d. Using power-lift or squat lift position, keep back locked into normal curvature. The power-lift position is useful for individuals with weak knees or thighs. The feet are a comfortable distance apart. The back is tight and the abdominal muscles lock the back in a slight inward curve. Straddle the object. Keep feet flat. Distribute weight to balls of feet or just behind them. Stand by making sure the back is locked in and the upper body comes up before the hips.
e. Use power grip to get maximum force from hands. The palm and fingers come into complete contact with the object and all fingers are bent at the same angles. The power-grip should always be used in lifting. This allows for maximum force to be developed. Hands should be at least 10 inches apart.
f. Lift while keeping back in locked-in position.
g. When lowering cot or stretcher, reverse steps.
h. Avoid bending at the waist.

B. Carrying
1. Precautions for carrying - whenever possible, transport patients on devices that can be rolled.
2. Guidelines for carrying
   a. Know or find out the weight to be lifted.
   b. Know limitations of the crew's abilities.
   c. Work in a coordinated manner and communicate with partners.
   d. Keep the weight as close to the body as possible.
   e. Keep back in a locked-in position and refrain from twisting.
   f. Flex at the hips, not the waist; bend at the knees.
   g. Do not hyperextend the back (do not lean back from the waist).
3. Correct carrying procedure
   a. Use correct lifting techniques to lift the stretcher.
   b. Partners should have similar strength and height.
4. One-handed carrying technique
   a. Pick up and carry with the back in the locked-in position.
   b. Avoid leaning to either side to compensate for the imbalance.
5. Correct carrying procedure on stairs
   a. When possible, use a stair chair instead of a stretcher.
   b. Keep back in locked-in position.
   c. Flex at the hips, not the waist; bend at the knees.
   d. Keep weight and arms as close to the body as possible.

C. Reaching
1. Guidelines for reaching
   a. Keep back in locked-in position.
   b. When reaching overhead, avoid hyperextended position.
   c. Avoid twisting the back while reaching.
2. Application of reaching techniques

a. Avoid reaching more than 15 - 20 inches in front of the body.
b. Avoid situations where prolonged (more than a minute) strenuous effort is needed in order to avoid injury.

3. Correct reaching for log rolls
   a. Keep back straight while leaning over patient.
   b. Lean from the hips.
   c. Use shoulder muscles to help with roll.

D. Pushing and pulling guidelines
1. Push, rather than pull, whenever possible.
2. Keep back locked-in.
3. Keep line of pull through center of body by bending knees.
4. Keep weight close to the body.
5. Push from the area between the waist and shoulder.
6. If weight is below waist level, use kneeling position.
7. Avoid pushing or pulling from an overhead position if possible.
8. Keep elbows bent with arms close to the sides.

II. Principles of Moving Patients

A. Urgent moves

1. Rapid extrication of patient sitting in vehicle
   a. One EMT-F with ambulance endorsement gets behind patient and brings cervical spine into neutral in-line position and provides manual immobilization.
   b. A second EMT-F with ambulance endorsement applies cervical immobilization device as the third EMT-F with ambulance endorsement first places long backboard near the door and then moves to the passenger seat.
   c. The second EMT-F with ambulance endorsement supports the thorax as the third EMT-F with ambulance endorsement frees the patient's legs from the pedals.
   d. At the direction of the second EMT-F with ambulance endorsement, he and the third EMT-F with ambulance endorsement rotate the patient in several short, coordinated moves until the patient's back is in the open doorway and his feet are on the passenger seat.
   e. Since the first EMT-F with ambulance endorsement usually cannot support the patient's head any longer, another available EMT-F with ambulance endorsement or a bystander supports the patient's head as the first EMT-F with ambulance endorsement gets out of the vehicle and takes support of the head outside of the vehicle.
   f. The end of the long backboard is placed on the seat next to the patient's buttocks. Assistants support the other end of the board as the first EMT-F with ambulance endorsement and the second EMT-F with ambulance endorsement lower the patient onto it.
   g. The second EMT-F with ambulance endorsement and the third EMT-F with ambulance endorsement slide the patient into the proper position on the board in short, coordinated moves.
   h. Several variations of the technique are possible, including assistance from bystanders. Must be accomplished without compromise to the spine.

III. Equipment
A. Stretchers/cots
1. Types
a. Wheeled stretcher
(i) Most commonly used device
(ii) Rolling
(A) Restricted to smooth terrain.
(B) Foot end should be pulled.
(C) One person must guide the stretcher at head.
(iii) Carrying
(A) Two rescuers
1) Preferable in narrow spaces, but requires more strength.
2) Easily unbalanced.
3) Rescuers should face each other from opposite ends of stretcher.
(B) Four rescuers
1) One rescuer at each corner.
2) More stability and requires less strength.
3) Safer over rough terrain.
4) Loading into ambulance
(a) Use sufficient lifting power.
(b) Load hanging stretchers before wheeled stretchers.
(c) Follow manufacturer's directions.
(d) Ensure all cots and patients secured before moving ambulance.
b. Portable stretcher
c. Stair chair
d. Backboards
(1) Long
(a) Traditional wooden device
(b) Manufactured varieties
(2) Short
(a) Traditional wooden device
(b) Vest type device
e. Scoop or orthopedic stretcher
f. Flexible stretcher
2. Maintenance - follow manufacturer's directions for inspection, cleaning, repair and upkeep.
B. Patient positioning
1. An unresponsive patient without suspected spine injury should be moved into the recovery position by rolling the patient onto his side (preferably the left) without twisting the body.
2. A patient with chest pain or discomfort or difficulty breathing should sit in a position of comfort as long as hypotension is not present.
3. A patient with suspected spine injury should be immobilized on a long backboard.
4. A patient in shock (hypoperfusion) should have his legs elevated 8 – 12 inches.
5. For the pregnant patient with hypotension, an early intervention is to position the patient on her left side.
6. A patient who is nauseated or vomiting should be transported in a position of comfort; however, the EMT-F with ambulance endorsement should be positioned appropriately to manage the airway.

Kinesthetic (Do)

1. The student should practice proper lifting techniques.
2. The student should practice proper carrying techniques.
3. The student should practice proper reaching techniques.
4. The student should practice determining whether emergency, urgent or non-emergency moves are appropriate.
5. The student should practice emergency moves.
6. The student should practice urgent moves.
7. The student should practice non-urgent moves.
8. The student should practice transferring a patient to a stretcher.
9. The student should practice carrying a patient on a stretcher.
10. The student should practice loading a patient on a stretcher into an ambulance.
11. The student should practice using a stair chair.
12. The student should practice using a scoop stretcher.
13. The student should practice positioning patients with different conditions.
    A. Unresponsiveness
    B. Chest pain/discomfort or difficulty breathing
    C. Suspected spine injury
    D. Shock (hypoperfusion)
    E. Patients who are vomiting or nauseous
    F. Pregnant patients

INSTRUCTOR ACTIVITIES

Supervise student practice.
Reinforce student progress in cognitive, affective, and psychomotor domains.
Redirect students having difficulty with content.

MODULE 1 Preparatory (Lesson 1-4)

Evaluation: Preparatory

COGNITIVE OBJECTIVES
At the completion of this lesson, the ambulance endorsement student will be able to:

Demonstrate knowledge of the cognitive objectives of Lesson 1-1: Introduction to Emergency Care.

Demonstrate knowledge of the cognitive objectives of Lesson 1-2: Baseline Vital Signs and SAMPLE History.

Demonstrate knowledge of the cognitive objectives of Lesson 1-3: Lifting and Moving Patients.

AFFECTIVE OBJECTIVES
At the completion of this lesson, the ambulance endorsement student will be able to:

Demonstrate knowledge of the affective objectives of Lesson 1-1: Introduction to Emergency Care.

Demonstrate knowledge of the affective objectives of Lesson 1-2: Baseline Vital Signs and SAMPLE History.

PSYCHOMOTOR OBJECTIVES
At the completion of this lesson, the ambulance endorsement student will be able to:

Demonstrate proficiency in the psychomotor objectives of Lesson 1-2: Baseline Vital Signs and SAMPLE History.

Demonstrate proficiency in the psychomotor objectives of Lesson 1-3: Lifting and Moving Patients.

Declarative (What)

I. Purpose of the evaluation
II. Items to be evaluated
III. Feedback from evaluation

Procedural (How)

1. Written evaluation based on the cognitive and affective objectives of Lessons 1-1 --> 1-3.
2. Practical evaluation stations based on the psychomotor objectives of Lessons 1-1 --> 1-3.

Contextual (When, Where and Why)

The evaluation is the final lesson in this module and is designed to bring closure to the module, and to assure that students are prepared to move to the next module. This modular evaluation is given to determine the effectiveness of the presentation of materials and how well students have retained the material. This is an opportunity for the students to make necessary adjustments in study habits or for the instructor to adjust the manner in which material is presented.

INSTRUCTOR ACTIVITIES

Supervise student evaluation.
Reinforce student progress in cognitive, affective, and psychomotor domains.
Redirect students having difficulty with content.

MODULE 2 Airway (Lesson 2-1)

Airway

COGNITIVE OBJECTIVES

At the completion of this lesson, the ambulance endorsement student will be able to:

2-1.1 Describe the steps in performing the skill of artificially ventilating a patient with a bag-valve-mask while using the jaw thrust. (C-1)

2-1.2 List the parts of a bag-valve-mask system. (C-1)

2-1.3 Describe the steps in performing the skill of artificially ventilating a patient with a bag-valve-mask for one and two rescuers. (C-1)

2-1.4 Describe the signs of adequate artificial ventilation using the bag-valve-mask. (C-1)

2-1.5 Describe the signs of inadequate artificial ventilation using the bag-valve-mask. (C-1)

2-1.6 Identify a non-rebreather face mask and state the oxygen flow requirements needed for its use. (C-1)

2-1.7 Describe the indications for using a nasal cannula versus a non-rebreather facemask. (C-1)

2-1.8 Identify a nasal cannula and state the flow requirements needed for its use. (C-1)

AFFECTIVE OBJECTIVES

At the completion of this lesson, the ambulance endorsement student will be able to:

2-1.9 Explain the rationale for providing adequate oxygenation through high-inspired oxygen concentrations to patients who, in the past, may have received low concentrations. (A-3)

PSYCHOMOTOR OBJECTIVES

At the completion of this lesson, the ambulance endorsement student will be able to:

2-1.10 Demonstrate the assembly of a bag-valve-mask unit. (P-1, 2)

2-1.11 Demonstrate the steps in performing the skill of artificially ventilating a patient with a bag-valve-mask for one and two rescuers. (P-1, 2)

2-1.12 Demonstrate the steps in performing the skill of artificially ventilating a patient with a bag-valve-mask while using the jaw thrust. (P-1, 2)

2-1.13 Demonstrate the use of a non-rebreather facemask and state the oxygen flow requirements needed for its use. (P-1, 2)

2-1.14 Demonstrate the use of a nasal cannula and state the flow requirements needed for its use. (P-1, 2)

Motivation: A patient without an airway is a dead patient.

Declarative (What)

I. Anatomy review
   A. Respiratory
      1. Nose and mouth
      2. Pharynx
         a. Oropharynx

b. Nasopharynx
3. Epiglottis - a leaf-shaped structure that prevents food and liquid from entering the trachea during swallowing.
4. Trachea (windpipe)
5. Cricoid cartilage - firm cartilage ring forming the lower portion of the larynx.
6. Larynx (voice box)
7. Bronchi - two major branches of the trachea to the lungs. Bronchus subdivides into smaller air passages ending at the alveoli.
8. Lungs
9. Diaphragm
    a. Inhalation (active)
        (1) Diaphragm and intercostal muscles contract, increasing the size of the thoracic cavity.
            (a) Diaphragm moves slightly downward, flares lower portion of rib cage.
            (b) Ribs move upward/outward.
        (2) Air flows into the lungs.
    b. Exhalation
        (1) Diaphragm and intercostal muscles relax, decreasing the size of the thoracic cavity.
            (a) Diaphragm moves upward.
            (b) Ribs move downward/inward.
        (2) Air flows out of the lungs.
10. Respiratory physiology
    a. Alveolar/capillary exchange
        (1) Oxygen-rich air enters the alveoli during each inspiration.
        (2) Oxygen-poor blood in the capillaries passes into the alveoli.
        (3) Oxygen enters the capillaries as carbon dioxide enters the alveoli.
    b. Capillary/cellular exchange
        (1) Cells give up carbon dioxide to the capillaries.
        (2) Capillaries give up oxygen to the cells.
    c. Adequate breathing
        (1) Normal Rate
            (a) Adult - 12-20/minute
            (b) Child - 15-30/minute
            (c) Infant - 25-50/minute
        (2) Rhythm
            (a) Regular
            (b) Irregular
        (3) Quality
            (a) Breath sounds - present and equal
            (b) Chest expansion - adequate and equal
            (c) Minimum effort of breathing - use of accessory muscles - predominantly in infants and children
        (4) Depth (tidal volume) - adequate
    d. Inadequate breathing
        (1) Rate - outside of normal ranges.
        (2) Rhythm - irregular
        (3) Quality
            (a) Breath sounds - diminished or absent
            (b) Chest expansion - unequal or inadequate

(c) Increased effort of breathing - use of accessory muscles - predominantly in infants and children
(4) Depth (tidal volume) - inadequate/shallow
(5) The skin may be pale or cyanotic (blue) and cool and clammy.
(6) There may be retractions above the clavicles, between the ribs and below the rib cage, especially in children.
(7) Nasal flaring may be present, especially in children.
(8) In infants, there may be "seesaw" breathing where the abdomen and chest move in opposite directions.
(9) Agonal respirations (occasional gasping breaths) may be seen just before death.

11. Infant and child anatomy considerations
    a. Mouth and nose - in general: All structures are smaller and more easily obstructed than in adults.
    b. Pharynx - infants and children's tongues take up proportionally more space in the mouth than adults.
    c. Trachea (windpipe)
        (1) Infants and children have narrower tracheas that are obstructed more easily by swelling.
        (2) The trachea is softer and more flexible in infants and children.
    d. Cricoid cartilage - like other cartilage in the infant and child, the cricoid cartilage is less developed and less rigid.
    e. Diaphragm - chest wall is softer, infants and children tend to depend more heavily on the diaphragm for breathing.

B. Adequate and inadequate artificial ventilation
    1. An EMT-F with ambulance endorsement is artificially ventilating a patient adequately when:
        a. The chest rises and falls with each artificial ventilation.
        b. The rate is sufficient, approximately 12 per minute for adults and 20 times per minute for children and infants.
        c. Heart rate returns to normal with successful artificial ventilation.
    2. Artificial ventilation is inadequate when:
        a. The chest does not rise and fall with artificial ventilation.
        b. The rate is too slow or too fast.
        c. Heart rate does not return to normal with artificial ventilation.

II. Techniques of Suctioning

A. Types of units
    1. Suction devices
        a. Mounted
        b. Portable
            (1) Electrical
            (2) Hand operated
    2. Suction catheters
        a. Hard or rigid ("tonsil sucker," "tonsil tip")
            (1) Used to suction the mouth and oropharynx of an unresponsive patient.
            (2) Should be inserted only as far as you can see.
            (3) Use rigid catheter for infants and children, but take caution not to touch back of airway.
        b. Soft (French)

(1) Useful for suctioning the nasopharynx and in other situations where a rigid catheter cannot be used.
(2) Should be measured so that it is inserted only as far as the base of the tongue.

III. Techniques of Artificial Ventilation

A. In order of preference, the methods for ventilating a patient by the EMT-F with ambulance endorsement are as follows:
1. Mouth-to-mask
2. Two-person bag-valve-mask
3. One-person bag-valve-mask

B. Body substance isolation

C. Mouth-to-mouth - review technique learned in BLS course.

D. Mouth-to-mask
1. Review technique learned in BLS course.
2. The mask should be connected to high flow oxygen = 15 liters per minute.

E. Bag-valve-mask
1. The bag-valve-mask consists of a self-inflating bag, one-way valve, and facemask, oxygen reservoir. It needs to be connected to oxygen to perform most effectively.
2. Bag-valve-mask issues
a. Volume of approximately 1,600 milliliters
b. Provides less volume than mouth-to-mask
c. Single EMT-F with ambulance endorsement may have difficulty maintaining an airtight seal.
d. Two EMT-Fs with ambulance endorsement using the device will be more effective.
e. Position self at top of patient's head for optimal performance.
f. Adjunctive airways (oral or nasal) may be necessary in conjunction with bag-valve-mask.
g. The bag-valve-mask should have:
(1) A self-refilling bag that is easily cleaned and sterilized.
(2) A non-jam valve that allows a maximum oxygen inlet flow of 15/lpm.
(3) No pop-off valve, or the pop-off valve must be disabled. Failure to do so may result in inadequate artificial ventilations.
(4) Standardized 15/22 mm fittings.
(5) An oxygen inlet and reservoir to allow for high concentration of oxygen.
(6) A true valve for non-rebreather.
(7) Should perform in all environmental conditions and temperature extremes.
(8) Available in infant, child and adult sizes.
3. Use when no trauma is suspected.
a. After opening airway, select correct mask size (adult, infant or child).
b. Position thumbs over top half of mask; index and middle fingers over bottom half.
c. Place apex of mask over bridge of nose, then lower mask over mouth and upper chin. If mask has large round cuff surrounding a ventilation port, center port over mouth.
d. Use ring and little fingers to bring jaw up to mask.
e. Connect bag to mask if not already done.
f. Have assistant squeeze bag with two hands until chest rises.

g. If alone, form a "C" around the ventilation port with thumb and index finger; use middle, ring and little fingers under jaw to maintain chin lift and complete the seal.
h. Repeat a minimum of every 5 seconds for adults and every 3 seconds for children and infants.
i. If chest does not rise and fall, re-evaluate.
(1) If chest does not rise, reposition head.
(2) If air is escaping from under the mask, reposition fingers and mask.
(3) Check for obstruction.
(4) If chest still does not rise and fall, use alternative method of artificial ventilation, e.g., pocket mask, manually triggered device.
j. If necessary, consider use of adjuncts.
(1) Oral airway
(2) Nasal airway

4. Use with suspected trauma
a. After opening airway, select correct mask size (adult, infant or child).
b. Immobilize head and neck, e.g., have an assistant hold head manually or use your knees to prevent movement.
c. Position thumbs over top half of mask; index and middle fingers over bottom half.
d. Place apex of mask over bridge of nose, then lower mask over mouth and upper chin. If mask has large round cuff surrounding a ventilation port, center port over mouth.
e. Use ring and little fingers to bring jaw up to mask without tilting head or neck.
f. Connect bag to mask if not already done.
g. Have assistant squeeze bag with two hands until chest rises.
h. Repeat every 5 seconds for adults and every 3 seconds for children and infants, continuing to hold jaw up without moving head or neck.
i. If chest does not rise, re-evaluate.
(1) If abdomen rises, reposition jaw.
(2) If air is escaping from under the mask, reposition fingers and mask.
(3) Check for obstruction.
(4) If chest still does not rise, use alternative method of artificial ventilation, e.g., pocket mask.
j. If necessary, consider use of adjuncts.
(1) Oral airway
(2) Nasal airway

F. Bag-valve-mask to stoma - use infant and child mask to make seal. A technique otherwise very similar to artificially ventilating through mouth. Head and neck do not need to be positioned.

IV. Oxygen

A. Equipment for oxygen delivery
1. Non-rebreather
a. Preferred method of giving oxygen to prehospital patients.
b. Up to 90% oxygen can be delivered.
c. Non-rebreather bag must be full before mask is placed on patient.
d. Flow rate should be adjusted so that when patient inhales, bag does not collapse (15 lpm).
e. Patients who are cyanotic, cool, clammy or short of breath need oxygen. Concerns about the dangers of giving too much oxygen to patients with history of

chronic obstructive pulmonary disease and infants and children have not been shown to be valid in the prehospital setting. Patients with chronic obstructive pulmonary disease and infants and children who require oxygen should receive high concentration oxygen.

f. Masks come in different sizes for adult, children and infants.

Be sure to select the correct size mask.

2. Nasal cannula - rarely the best method of delivering adequate oxygen to the prehospital patient. Should be used only when patients will not tolerate a non-rebreather mask, despite coaching from the EMT-F with ambulance endorsement

MODULE 2 Airway (Lesson 2-2)

Practical Lab: Airway

COGNITIVE OBJECTIVES
At the completion of this lesson, the ambulance endorsement student will be able to:
Demonstrate the cognitive objectives of Lesson 2-1: Airway.

AFFECTIVE OBJECTIVES
Demonstrate the affective objectives of Lesson 2-1: Airway.

PSYCHOMOTOR OBJECTIVES
Demonstrate the psychomotor objectives of Lesson 2-1: Airway.

INSTRUCTOR ACTIVITIES
Supervise student practice.
Reinforce student progress in cognitive, affective, and psychomotor domains.
Redirect students having difficulty with content.

MODULE 2 Airway (Lesson 2-3)

Evaluation: Airway

COGNITIVE OBJECTIVES
At the completion of this lesson, the ambulance endorsement student will be able to:
Demonstrate knowledge of the cognitive objectives of Lesson 2-1: Airway.

AFFECTIVE OBJECTIVES
At the completion of this lesson, the ambulance endorsement student will be able to:
Demonstrate knowledge of the affective objectives of Lesson 2-1: Airway.

PSYCHOMOTOR OBJECTIVES
At the completion of this lesson, the ambulance endorsement student will be able to:
Demonstrate proficiency in the psychomotor objectives of Lesson 2-1: Airway.

Procedural (How)

1. Written evaluation based on the cognitive and affective objectives of Lesson 2-1.
2. Practical evaluation stations based on the psychomotor objectives of Lesson 2-1.

INSTRUCTOR ACTIVITIES

Supervise student evaluation.
Reinforce student progress in cognitive, affective, and psychomotor domains.
Redirect students having difficulty with content.

MODULE 3 Patient Assessment (Lesson 3-1)

Initial Assessment

COGNITIVE OBJECTIVES

At the completion of this lesson, the ambulance endorsement student will be able to:

3-1.1 Summarize the reasons for forming a general impression of the patient. (C-1)
3-1.2 Discuss methods of assessing altered mental status. (C-1)
3-1.3 Differentiate between assessing the altered mental status in the adult, child and infant patient. (C-3)
3-1.4 Discuss methods of assessing the airway in the adult, child and infant patient. (C-1)
3-1.5 State reasons for management of the cervical spine once the patient has been determined to be a trauma patient. (C-1)
3-1.6 Describe methods used for assessing if a patient is breathing. (C-1)
3-1.7 State what care should be provided to the adult, child and infant patient with adequate breathing. (C-1)
3-1.8 State what care should be provided to the adult, child and infant patient without adequate breathing. (C-1)
3-1.9 Differentiate between a patient with adequate and inadequate breathing. (C-3)
3-1.10 Distinguish between methods of assessing breathing in the adult, child and infant patient. (C-3)
3-1.11 Compare the methods of providing airway care to the adult, child and infant patient. (C-3)
3-1.12 Describe the methods used to obtain a pulse. (C-1)
3-1.13 Differentiate between obtaining a pulse in an adult, child and infant patient. (C-3)
3-1.14 Discuss the need for assessing the patient for external bleeding. (C-1)
3-1.15 Describe normal and abnormal findings when assessing skin color. (C-1)
3-1.16 Describe normal and abnormal findings when assessing skin temperature. (C-1)
3-1.17 Describe normal and abnormal findings when assessing skin condition. (C-1)
3-1.18 Describe normal and abnormal findings when assessing skin capillary refill in the infant and child patient. (C-1)
3-1.19 Explain the reason for prioritizing a patient for care and transport. (C-1)

AFFECTIVE OBJECTIVES

At the completion of this lesson, the ambulance endorsement student will be able to:

3-1.20 Explain the importance of forming a general impression of the patient. (A-1)
3-1.21 Explain the value of performing an initial assessment. (A-2)

PSYCHOMOTOR OBJECTIVES

At the completion of this lesson, the ambulance endorsement student will be able to:

3-1.22 Demonstrate the techniques for assessing mental status. (P-1, 2)
3-1.23 Demonstrate the techniques for assessing the airway. (P-1, 2)
3-1.24 Demonstrate the techniques for assessing if the patient is breathing. (P-1, 2)
3-1.25 Demonstrate the techniques for assessing if the patient has a pulse. (P-1, 2)
3-1.26 Demonstrate the techniques for assessing the patient for external bleeding. (P-1, 2)

3-1.27 Demonstrate the techniques for assessing the patient's skin color, temperature, condition and capillary refill (infants and children only). (P-1, 2)
3-1.28 Demonstrate the ability to prioritize patients. (P-1, 2)

Declarative (What)

III. General Impression of the Patient
   A. Definition
      1. The general impression is formed to determine priority of care and is based on the EMT-F with ambulance endorsement's immediate assessment of the environment and the patient's chief complaint.
      2. Determine if ill, i.e., medical or injured (trauma). If injured, identify mechanism of injury.
      3. Age
      4. Sex
      5. Race
   B. Assess patient and determine if the patient has a life threatening condition.
      1. If a life threatening condition is found, treat immediately.
      2. Assess nature of illness or mechanism of injury.
IV. Assess Patient's Mental Status. Maintain Spinal Immobilization if Needed.
   A. Begin by speaking to the patient. State name, tell the patient that you are an emergency medical technician, and explain that you are here to help.
   B. Levels of mental status
      1. Alert
      2. Responds to Verbal stimuli.
      3. Responds to Painful stimuli.
      4. Unresponsive - no gag or cough
V. Assess the Patient's Airway Status.
   A. Responsive patient - Is the patient talking or crying?
      1. If yes, assess for adequacy of breathing.
      2. If no, open airway.
   B. Unresponsive patient - Is the airway open?
      1. Open the airway. Positioning is patient, age, and size specific.
         a. For medical patients, perform the head-tilt chin-lift.
            (1) Clear
            (2) Not clear - Clear the airway.
         b. For trauma patients or those with unknown nature of illness, the cervical spine should be stabilized/immobilized and the jaw thrust maneuver performed.
            (1) Clear
            (2) Not clear - Clear the airway.
IV. Assess the Patient's Breathing.
   A. If breathing is adequate and the patient is responsive, oxygen may be indicated.
   B. All responsive patients breathing >24 breaths per minute or <8 breaths per minute should receive high flow oxygen (defined as a 15 LPM non-rebreather mask).
   C. If the patient is unresponsive and the breathing is adequate, open and maintain the airway and provide high concentration oxygen.
   D. If the breathing is inadequate, open and maintain the airway, assist the patient's breathing and utilize ventilator adjuncts. In all cases oxygen should be used.

E. If the patient is not breathing, open and maintain the airway and ventilate using ventilatory adjuncts. In all cases oxygen should be used.

V. Assess the Patient's Circulation.
   A. Assess the patient's pulse.
      1. The circulation is assessed by feeling for a radial pulse.
         a. In a patient one year old or less, palpate a brachial pulse.
         b. If no radial pulse is felt, palpate carotid pulse.
            (1) If pulseless start CPR.
   B. Assess if major bleeding is present. If bleeding is present, control bleeding.
   C. Assess the patient's perfusion by evaluating skin color and temperature.
      1. The patient's skin color is assessed by looking at the nail beds, lips and eyes.
         b. Normal - pink
         c. Abnormal conditions
            (1) Pale
            (2) Cyanotic or blue-gray
            (3) Flushed or red
            (4) Jaundice or yellow
      2. Assess the patient's skin temperature by feeling the skin.
         b. Normal - warm
         c. Abnormal skin temperatures
            (1) Hot
            (2) Cool
            (3) Cold
            (4) Clammy - cool & moist
      3. Assess the patient's skin condition. This is an assessment of the amount of moisture on the skin.
         b. Normal - dry
         c. Abnormal - moist or wet
      4. Assess capillary refill in infant and child patients.
         b. Normal capillary refill is less than two seconds.
         c. Abnormal capillary refill is greater than two seconds.

VI. Identify Priority Patients.
   A. Consider:
      1. Poor general impression
      2. Unresponsive patients - no gag or cough
      3. Responsive, not following commands
      4. Difficulty breathing
      5. Shock (hypoperfusion)
      6. Complicated childbirth
      7. Chest pain with BP <100 systolic
      8. Uncontrolled bleeding
      9. Severe pain anywhere
   B. Expedite transport of the patient. Consider ALS back up.

VII. Proceed to the appropriate focused history and physical examination.

MODULE 3 Patient Assessment (Lesson 3-2)

Focused History and Physical Exam: Trauma

COGNITIVE OBJECTIVES

At the completion of this lesson, the ambulance endorsement student will be able to:

3-2.1 Discuss the reasons for reconsideration concerning the mechanism of injury. (C-1)
3-2.2 State the reasons for performing a rapid trauma assessment. (C-1)
3-2.3 Recite examples and explain why patients should receive a rapid trauma assessment. (C-1)
3-2.4 Describe the areas included in the rapid trauma assessment and discuss what should be evaluated. (C-1)
3-2.5 Differentiate when the rapid assessment may be altered in order to provide patient care. (C-3)
3-2.6 Discuss the reason for performing a focused history and physical exam. (C-1)

AFFECTIVE OBJECTIVES

At the completion of this lesson, the ambulance endorsement student will be able to:

3-2.7 Recognize and respect the feelings that patients might experience during assessment. (A-1)

PSYCHOMOTOR OBJECTIVES

At the completion of this lesson, the ambulance endorsement student will be able to:

3-2.8 Demonstrate the rapid trauma assessment that should be used to assess a patient based on mechanism of injury. (P-1, 2)

Declarative (What)

I. Re-consider Mechanism of Injury
   A. Significant mechanism of injury
      1. Ejection from vehicle
      2. Death in same passenger compartment
      3. Falls > 20 feet
      4. Roll-over of vehicle
      5. High-speed vehicle collision
      6. Vehicle-pedestrian collision
      7. Motorcycle crash
      8. Unresponsive or altered mental status
      9. Penetrations of the head, chest, or abdomen
      10. Hidden injuries
         a. Seat belts
            (1) If buckled, may have produced injuries.
            (2) If patient had seat belt on, it does not mean they do not have injuries.
         b. Airbags
            (1) May not be effective without seat belt.
            (2) Patient can hit wheel after deflation.
            (3) Lift the deployed airbag and look at the steering wheel for deformation.

(a) "Lift and look" under the bag after the patient has been removed.
(b) Any visible deformation of the steering wheel should be regarded as an indicator of potentially serious internal injury, and appropriate action should be taken.

B. Infant and child considerations
   1. Falls >10 feet
   2. Bicycle collision
   3. Vehicle in medium speed collision

II. Perform rapid trauma assessment on patients with significant mechanism of injury to determine life-threatening injuries. In the responsive patient, symptoms should be sought before and during the trauma assessment.
   A. Continue spinal stabilization.
   B. Consider ALS request.
   C. Reconsider transport decision.
   D. Assess mental status.
   E. As you inspect and palpate, look and feel for the following examples of injuries or signs of injury:
      1. Deformities
      2. Contusions
      3. Abrasions
      4. Punctures/penetrations
      5. Burns
      6. Tenderness
      7. Lacerations
      8. Swelling
   F. Assess the head, inspect and palpate for injuries or signs of injury.
      1. Deformities
      2. Contusions
      3. Abrasions
      4. Punctures/penetrations
      5. Burns
      6. Tenderness
      7. Lacerations
      8. Swelling
      9. Crepitation
   G. Assess the neck, inspect and palpate for injuries or signs of injury.
      1. Deformities
      2. Contusions
      3. Abrasions
      4. Punctures/penetrations
      5. Burns
      6. Tenderness
      7. Lacerations
      8. Swelling
      9. Jugular vein distension (JVD)
      10. Crepitation
   H. Apply cervical spinal immobilization collar (CSIC). May use information from the head injury lesson at this time.
   I. Assess the chest, inspect and palpate for:
      1. Injuries or signs of injury

2. Deformities
3. Contusions
4. Abrasions
5. Punctures/penetrations
6. Burns
7. Tenderness
8. Lacerations
9. Swelling
10. Paradoxical motion
11. Crepitation
12. Breath sounds in the apices, mid-clavicular line, bilaterally and at the bases, mid-axillary line, bilaterally
    a. Present
    b. Absent
    c. Equal

J. Assess the abdomen, inspect and palpate for injuries or signs of injury.
1. Deformities
2. Contusions
3. Abrasions
4. Punctures/penetrations
5. Burns
6. Tenderness
7. Lacerations
8. Swelling
9. Firm
10. Soft
11. Distended

K. Assess the pelvis, inspect and palpate for injuries or signs of injury.
1. Deformities
2. Contusions
4. Abrasions
5. Punctures/penetrations
6. Burns
7. Tenderness
8. Lacerations
9. Swelling
10. If no pain is noted, gently compress the pelvis to determine tenderness or motion.

L. Assess all four extremities, inspect and palpate for injuries or signs of injury.
1. Deformities
2. Contusions
3. Abrasions
4. Punctures/penetrations
5. Burns
6. Tenderness
7. Lacerations
8. Swelling
9. Distal pulse
11. Sensation
12. Motor function

M. Roll patient with spinal precautions and assess posterior body, inspect and palpate, examining for injuries or signs of injury.
N. Assess baseline vital signs.
O. Assess SAMPLE history.

III. For patients with no significant mechanism of injury, e.g., cut finger
A. Perform focused history and physical exam of injuries based on the components of the rapid assessment. The focused assessment is performed on the specific injury site.
B. Assess baseline vital signs.
C. Assess SAMPLE history.

Procedural (How)

The assessment is completed by visually inspecting, physically palpating and auscultating, and verbally communicating with the patient and family. The assessment is an input/output process, where the assessment findings are the input and the treatment is the output.

1. Review of scene size-up.
2. Review of the initial assessment.
3. Students should be shown audio-visual aids or materials of various trauma scenes to evaluate the mechanism of injury.
4. Demonstrate a rapid patient assessment.

Contextual (When, Where, Why)

The history and physical exam are performed following the initial assessment and correction of immediate threats to life. During this process, obtain additional information regarding the patient's condition. This assessment may be performed at the same location as the initial assessment, unless the scene or patient's condition requires movement. This assessment is the second hands-on approach to gain information to continue providing patient care, managing life threats, and making a transport decision.

MODULE 3 Patient Assessment (Lesson 3-4)

Detailed Physical Exam

COGNITIVE OBJECTIVES

At the completion of this lesson, the ambulance endorsement student will be able to:

3-4.1 Discuss the components of the detailed physical exam. (C-1)

3-4.2 State the areas of the body that are evaluated during the detailed physical exam. (C-1)

3-4.3 Explain what additional care should be provided while performing the detailed physical exam. (C-1)

3-4.4 Distinguish between the detailed physical exam that is performed on a trauma patient and that of the medical patient. (C-3)

AFFECTIVE OBJECTIVES

At the completion of this lesson, the ambulance endorsement student will be able to:

3-4.5 Explain the rationale for the feelings that these patients might be experiencing. (A-3)

PSYCHOMOTOR OBJECTIVES

At the completion of this lesson, the ambulance endorsement student will be able to:

3-4.6 Demonstrate the skills involved in performing the detailed physical exam. (P-1, 2)

Declarative (What)

I. Detailed Physical Exam
   A. Patient and injury specific, e.g., cut finger would not require the detailed physical exam.
   B. Perform a detailed physical examination on the patient to gather additional information.
      1. As you inspect and palpate, look and/or feel for the following examples of injuries or signs of injury:
         a. Deformities
         b. Contusions
         c. Abrasions
         d. Punctures/penetrations
         e. Burns
         f. Tenderness
         g. Lacerations
         h. Swelling
      2. Assess the head, inspect and palpate for injuries or signs of injury.
         a. Deformities
         b. Contusions
         c. Abrasions
         d. Punctures/penetrations
         e. Burns
         f. Tenderness
         g. Lacerations

h. Swelling
3. Assess the face, inspect and palpate for injuries or signs of injury.
   a. Deformities
   b. Contusions
   c. Abrasions
   d. Punctures/penetrations
   e. Burns
   f. Tenderness
   g. Lacerations
   h. Swelling
4. Assess the ears, inspect and palpate for injuries or signs of injury.
   a. Deformities
   b. Contusions
   c. Abrasions
   d. Punctures/penetrations
   e. Burns
   f. Tenderness
   g. Lacerations
   h. Swelling
   i. Drainage
5. Assess the eyes, inspect for injuries or signs of injury.
   a. Deformities
   b. Contusions
   c. Abrasions
   d. Punctures/penetrations
   e. Burns
   f. Tenderness
   g. Lacerations
   h. Swelling
   i. Discoloration
   j. Unequal pupils
   k. Foreign bodies
   l. Blood in anterior chamber
6. Assess the nose, inspect and palpate for injuries or signs of injury.
   a. Deformities
   b. Contusions
   c. Abrasions
   d. Punctures/penetrations
   e. Burns
   f. Tenderness
   g. Lacerations
   h. Swelling
   i. Drainage
   j. Bleeding
7. Assess the mouth, inspect for injuries or signs of injury.
   a. Deformities
   b. Contusions
   c. Abrasions
   d. Punctures/penetrations
   e. Burns

f. Tenderness
g. Lacerations
h. Swelling
i. Teeth
j. Obstructions
k. Swollen or lacerated tongue
l. Odors
m. Discoloration

8. Assess the neck, inspect and palpate for injuries or signs of injury.
   a. Deformities
   b. Contusions
   c. Abrasions
   d. Punctures/penetrations
   e. Burns
   f. Tenderness
   g. Lacerations
   h. Swelling
   i. Jugular vein distension
   j. Crepitance
9. Assess the chest, inspect and palpate for injuries or signs of injury.
   a. Deformities
   b. Contusions
   c. Abrasions
   d. Punctures/penetrations
   e. Burns
   f. Tenderness
   g. Lacerations
   h. Swelling
   i. Crepitance
   j. Paradoxical motion
   k. Breath sounds in the apices, mid-clavicular line, bilaterally and at the bases, mid-axillary line, bilaterally.
      (1) Present
      (2) Absent
      (3) Equal
10. Assess the abdomen, inspect and palpate for injuries or signs of injury.
    a. Deformities
    b. Contusions
    c. Abrasions
    d. Punctures/penetrations
    e. Burns
    f. Tenderness
    g. Lacerations
    h. Swelling
    i. Firm
    j. Soft
    k. Distended
11. Assess the pelvis, inspect and palpate for injuries or signs of injury.
    a. Deformities
    b. Contusions

c. Abrasions
d. Punctures/penetrations
e. Burns
f. Tenderness
g. Lacerations
h. Swelling
i. If the patient does not complain of pain or is unresponsive, gently flex and compress the pelvis to determine stability.

12. Assess all four extremities, inspect and palpate for injuries or signs of injury.
    a. Deformities
    b. Contusions
    c. Abrasions
    d. Punctures/penetrations
    e. Burns
    f. Tenderness
    g. Lacerations
    h. Swelling
    i. Distal pulses
    j. Sensation
    k. Motor function
13. Roll with spinal precautions and assess posterior aspect of body, inspect and palpate for injuries or signs of injury.
    a. Deformities
    b. Contusions
    c. Abrasions
    d. Punctures/penetrations
    e. Burns
    f. Tenderness
    g. Lacerations
    h. Swelling

II. Assess Baseline Vital Signs.

Typically this assessment will be performed while en route to the receiving facility.

MODULE 3 Patient Assessment (Lesson 3-5)

On-Going Assessment

COGNITIVE OBJECTIVES

At the completion of this lesson, the ambulance endorsement student will be able to:

3-5.1 Discuss the reasons for repeating the initial assessment as part of the on-going assessment. (C-1)
3-5.2 Describe the components of the on-going assessment. (C-1)
3-5.3 Describe trending of assessment components. (C-1)

AFFECTIVE OBJECTIVES

At the completion of this lesson, the ambulance endorsement student will be able to:

3-5.4 Explain the value of performing an on-going assessment. (A-2)
3-5.5 Recognize and respect the feelings that patients might experience during assessment. (A-1)
3-5.6 Explain the value of trending assessment components to other health professionals who assume care of the patient. (A-2)

PSYCHOMOTOR OBJECTIVES

At the completion of this lesson, the ambulance endorsement student will be able to:

3-5.7 Demonstrate the skills involved in performing the on-going assessment. (P-1, 2)

Declarative (What)

I. Repeat initial assessment. For a stable patient, repeat and record every 15 minutes. For an unstable patient, repeat and record at a minimum every 5 minutes.
   A. Reassess mental status.
   B. Maintain open airway.
   C. Monitor breathing for rate and quality.
   D. Reassess pulse for rate and quality.
   E. Monitor skin color and temperature.
   F. Re-establish patient priorities.
II. Reassess and record vital signs.
III. Repeat focused assessment regarding patient complaint or injuries.
IV. Check interventions.
   A. Assure adequacy of oxygen delivery/artificial ventilation.
   B. Assure management of bleeding.
   C. Assure adequacy of other interventions.

MODULE 3 Patient Assessment (Lesson 3-6)

Communications

COGNITIVE OBJECTIVES

At the completion of this lesson, the Ambulance Endorsement student will be able to:

3-6.1 List proper methods of initiating and terminating a radio call. (C-1)
3-6.2 State the proper sequence for delivery of patient information. (C-1)
3-6.3 Explain the importance of effective communication of patient information in the verbal report. (C-1)
3-6.4 Identify the essential components of the verbal report. (C-1)
3-6.5 Describe the attributes for increasing effectiveness and efficiency of verbal communications. (C-1)
3-6.6 State legal aspects to consider in verbal communication. (C-1)
3-6.7 Discuss the communication skills that should be used to interact with the patient. (C-1)
3-6.8 Discuss the communication skills that should be used to interact with the family, bystanders, individuals from other agencies while providing patient care and the difference between skills used to interact with the patient and those used to interact with others. (C-1)
3-6.9 List the correct radio procedures in the following phases of a typical call: (C-1)

- To the scene.
- At the scene.
- To the facility.
- At the facility.
- To the station.
- At the station.

AFFECTIVE OBJECTIVES

At the completion of this lesson, the ambulance endorsement student will be able to:

3-6.10 Explain the rationale for providing efficient and effective radio communications and patient reports. (A-3)

PSYCHOMOTOR OBJECTIVES

At the completion of this lesson, the ambulance endorsement student will be able to:

3-6.11 Perform a simulated, organized, concise radio transmission. (P-2)
3-6.12 Perform an organized, concise patient report that would be given to the staff at a receiving facility. (P-2)
3-6.13 Perform a brief, organized report that would be given to an ALS provider arriving at an incident scene at which the EMT-F with ambulance endorsement was already providing care. (P-2)

Declarative (What)

I. Communication
   A. Communication system
      1. System components
         a. Base station - a radio that is located at a stationary site such as a hospital, mountaintop, or public safety agency.
         b. Mobile two-way radios (transmitter/receivers)
            (1) Implies a vehicular mounted device.
            (2) Mobile transmitters usually transmit at lower power than base stations (typically 20 - 50 watts).
            (3) Typical transmission range is 10 - 15 miles over average terrain.
         c. Portable radios (transmitter/receivers)
            (1) Implies a handheld device.
            (2) Typically have power output of 1 - 5 watts, limiting their range.
         d. Repeater/base station - receives a transmission from a low-power portable or mobile radio on one frequency and retransmits at a higher power on another frequency.
         e. Digital radio equipment
         f. Cellular telephones
      2. Radio communications
         a. Radio frequencies - assigned and licensed by the Federal Communication Commission (FCC).
         b. Response to the scene
            (1) The dispatcher needs to be notified that the call was received.
            (2) Dispatch needs to know that the unit is en route.
            (3) Other agencies should be notified as appropriate, e.g., local hospital.
         c. Arrival at the scene - the dispatcher must be notified.
      3. Communication with medical direction
         a. Communication with receiving facilities
         b. EMT-F with ambulance endorsements provide information that allows hospitals to prepare for a patient's arrival by having the right room, equipment and personnel prepared.
         c. Patient reporting concepts
            (1) When speaking on the radio, keep these principles in mind:
               (a) Radio is on and volume is properly adjusted.
               (b) Listen to the frequency and ensure it is clear before beginning a transmission.
               (c) Press the "press to talk" (PTT) button on the radio and wait for one second before speaking.
               (d) Speak with lips about 2 to 3 inches from the microphone.
               (e) Address the unit being called, then give the name of the unit (and number if appropriate) where the transmission is originating from.
               (f) The unit being called will signal that the transmission should start by saying "go ahead" or some other term standard for that area. A response of "stand by" means wait until further notice.
               (g) Speak clearly and slowly, in a monotone voice.
               (h) Keep transmissions brief. If, on occasion, a transmission takes longer than 30 seconds, stop at that point and pause for a few seconds so that emergency traffic can use the frequency if necessary.

(i) Use clear text.
(j) Avoid codes.
(k) Avoid meaningless phrases like "Be advised."
(l) Courtesy is assumed, so there is no need to say "please," "thank you" and "you're welcome."
(m) When transmitting a number that might be confused (e.g., a number in the teens), give the number, then give the individual digits.
(n) The airwaves are public and scanners are popular. EMS transmissions may be overheard by more than just the EMS community. Do not give a patient's name over the air.
(o) For the same reason, be careful to remain objective and impartial in describing patients. An EMT-F with ambulance endorsement may be sued for slander if he injures someone's reputation in this way.
(p) An EMT-F with ambulance endorsement rarely acts alone: Use "we" instead of "I."
(q) Do not use profanity on the air. The FCC takes a dim view of such language and may impose substantial fines.
(r) Avoid words that are difficult to hear like "yes" and "no." Use "affirmative" and "negative."
(s) Use the standard format for transmission of information.
(t) When the transmission is finished, indicate this by saying "over." Get confirmation that the message was received.
(u) Avoid codes, especially those that are not standardized.
(v) Avoid offering a diagnosis of the patient's problem.
(w) Use EMS frequencies only for EMS communication.
(x) Reduce background noise as much as possible by closing the window.

(2) Notify the dispatcher when the unit leaves the scene.

(3) When communicating with medical direction or the receiving facility, a verbal report should be given. The essential elements of such a report, in the order they should be given, are:
(a) Identify unit and level of provider (who and what)
(b) Estimated time of arrival
(c) Patient's age and sex
(d) Chief complaint
(e) Brief, pertinent history of the present illness
(f) Major past illnesses
(g) Mental status
(h) Baseline vital signs
(i) Pertinent findings of the physical exam
(j) Emergency medical care given
(k) Response to emergency medical care

(4) After giving this information, the EMT-F with ambulance endorsement will continue to assess the patient. Additional vital signs may be taken and new information may become available, particularly on long transports. In some systems, this information should be relayed to the hospital (see local protocol). Information that must be transmitted includes deterioration in the patient's condition.

(5) Arrival at the hospital
(a) The dispatcher must be notified.
(b) In some systems, the hospital should also be notified.

(6) Leaving the hospital for the station - the dispatcher should be notified.
(7) Arrival at the station - the dispatcher should be notified.

4. System maintenance
   a. Communication equipment needs to be checked periodically by a qualified technician, e.g., to ensure that a radio is not drifting from its assigned frequency.
   b. As technology changes, new equipment becomes available that may have a role in EMS systems, e.g., cellular phones.
   c. An EMS system must provide a back up in case the usual procedures do not work.

B. Verbal communication
   1. After arrival at the hospital, give a verbal report to the staff.
      a. Introduce the patient by name (if known).
      b. Summarize the information given over the radio:
         (1) Chief complaint
         (2) History that was not given previously
         (3) Additional treatment given en route
         (4) Additional vital signs taken en route
      c. Give additional information that was collected but not transmitted.
C. Written communication - this is covered in the lesson on documentation.
D. Interpersonal communication
   1. Make and keep eye contact with the patient.
   2. When practical, position yourself at a level lower than the patient.
   3. Be honest with the patient.
   4. Use language the patient can understand.
   5. Be aware of your own body language.
   6. Speak clearly, slowly and distinctly.
   7. Use the patient's proper name, either first or last, depending on the circumstances. Ask the patient what he wishes to be called.
   8. If a patient has difficulty hearing, speak clearly with lips visible.
   9. Allow the patient enough time to answer a question before asking the next one.
   10. Act and speak in a calm, confident manner.
E. Communication with hearing impaired, non-English speaking populations, use of interpreters, etc.
F. Communication with elderly
   1. Potential for visual deficit
   2. Potential for auditory deficit

MODULE 3 Patient Assessment (Lesson 3-7)

Documentation

COGNITIVE OBJECTIVES

At the completion of this lesson, the ambulance endorsement student will be able to:

3-7.1 Explain the components of the written report and list the information that should be included in the written report. (C-1)
3-7.2 Identify the various sections of the written report. (C-1)
3-7.3 Describe what information is required in each section of the prehospital care report and how it should be entered. (C-1)
3-7.4 Define the special considerations concerning patient refusal. (C-1)
3-7.5 Describe the legal implications associated with the written report. (C-1)
3-7.6 Discuss all state and/or local record and reporting requirements. (C-1)

AFFECTIVE OBJECTIVES

At the completion of this lesson, the ambulance endorsement student will be able to:

3-7.7 Explain the rationale for patient care documentation. (A-3)
3-7.8 Explain the rationale for the EMS system gathering data. (A-3)
3-7.9 Explain the rationale for using medical terminology correctly. (A-3)
3-7.10 Explain the rationale for using an accurate and synchronous clock so that information can be used in trending. (A-3)

PSYCHOMOTOR OBJECTIVES

At the completion of this lesson, the ambulance endorsement student will be able to:

3-7.11 Complete a prehospital care report. (P-2)

Declarative (What)

I. Documentation
   A. Minimum data set
      1. Patient information gathered at time of EMT-F with ambulance endorsement initial contact with patient on arrival at scene, following all interventions and on arrival at facility.
         a. Chief complaint
         b. Level of consciousness (AVPU) - mental status
         c. Systolic blood pressure for patients greater than 3 years old
         d. Skin perfusion (capillary refill) for patients less than 6 years old
         e. Skin color and temperature
         f. Pulse rate
         g. Respiratory rate and effort
      2. Administrative information
         a. Time incident reported
         b. Time unit notified
         c. Time of arrival at patient
         d. Time unit left scene
         e. Time of arrival at destination

f. Time of transfer of care
3. Accurate and synchronous clocks

B. Prehospital care report
1. Functions
a. Continuity of care - a form that is not read immediately in the emergency department may very well be referred to later for important information.
b. Legal document
(1) A good report has documented what emergency medical and any changes upon arrival at the receiving facility.
(2) The person who completed the form ordinarily must go to court with the form.
(3) Information should include objective and subjective information and be clear.
c. Educational - used to demonstrate proper documentation and how to handle unusual or uncommon cases.
d. Administrative
(1) Billing
(2) Service statistics
e. Research
f. Evaluation and continuous quality improvement
2. Use
a. Types
(1) Traditional written form with check boxes and a section for narrative.
(2) Computerized version where information is filled in by means of an electronic clipboard or a similar device.
b. Sections
(1) Run data - date, times, service, unit, names of crew
(2) Patient data - patient name, address, date of birth, insurance information, sex, age, nature of call, mechanism of injury, location of patient, treatment administered prior to arrival of EMT-F with ambulance endorsement, signs and symptoms, care administered, baseline vital signs, SAMPLE history and changes in condition.
(3) Check boxes
(a) Be sure to fill in the box completely.
(b) Avoid stray marks.
(4) Narrative section (if applicable)
(a) Describe, don't conclude.
(b) Include pertinent negatives.
(c) Record important observations about the scene, e.g., suicide note, weapon, etc.
(d) Avoid radio codes.
(e) Use abbreviations only if they are standard.
(f) When information of a sensitive nature is documented, note the source of that information, e.g., communicable diseases.
(g) State reporting requirements
(h) Be sure to spell words correctly, especially medical words. If you do not know how to spell it, find out or use another word.
(i) For every reassessment, record time and findings.
(5) Other state or local requirements

a. Confidentiality - the form itself and the information on the form are considered confidential. Be familiar with state laws.
b. Distribution - local and state protocol and procedures will determine where the different copies of the form should be distributed.

3. Falsification issues
   a. When an error of omission or commission occurs, the EMT-F with ambulance endorsement should not try to cover it up. Instead, document what did or did not happen and what steps were taken (if any) to correct the situation.
   b. Falsification of information on the prehospital care report may lead not only to suspension or revocation of the EMT-F with ambulance endorsement's certification/license, but also to poor patient care because other health care providers have a false impression of which assessment findings were discovered or what treatment was given.
   c. Specific areas of difficulty
4. Vital signs - document only the vital signs that were actually taken.
5. Treatment - if a treatment like oxygen was overlooked, do not chart that the patient was given oxygen.

C. Documentation of patient refusal
   1. Competent adult patients have the right to refuse treatment.
   2. Before the EMT-F with ambulance endorsement leaves the scene, however, he should:
      a. Try again to persuade the patient to go to a hospital.
      b. Ensure the patient is able to make a rational, informed decision, e.g., not under the influence of alcohol or other drugs, or illness/injury effects.
      c. Inform the patient why he should go and what may happen to him if he does not.
      d. Consult medical direction as directed by local protocol.
      e. If the patient still refuses, document any assessment findings and emergency medical care given, then have the patient sign a refusal form.
      f. Have a family member, police officer or bystander sign the form as a witness. If the patient refuses to sign the refusal form, have a family member, police officer or bystander sign the form verifying that the patient refused to sign.
      g. Complete the prehospital care report.
         (1) Complete patient assessment.
         (2) Care EMT-F with ambulance endorsement wished to provide for the patient.
         (3) Statement that the EMT-F with ambulance endorsement explained to the patient the possible consequences of failure to accept care, including potential death.
         (4) Offer alternative methods of gaining care.
         (5) State willingness to return.

D. Special situations/reports/incident reporting
   1. Correction of errors
      a. Errors discovered while the report form is being written
         (1) Draw a single horizontal line through the error, initial it and write the correct information beside it.
         (2) Do not try to obliterate the error - this may be interpreted as an attempt to cover up a mistake.
      b. Errors discovered after the report form is submitted

(1) Preferably in a different color ink, draw a single line through the error, initial and date it and add a note with the correct information.
(2) If information was omitted, add a note with the correct information, the date and the EMT-F with ambulance endorsement's initials.

2. Multiple casualty incidents (MCI)
   a. When there is not enough time to complete the form before the next call, the EMT-F with ambulance endorsement will need to fill out the report later.
   b. The local MCI plan should have some means of recording important medical information temporarily, e.g., triage tag, that can be used later to complete the form.
   c. The standard for completing the form in an MCI is not the same as for a typical call. The local plan should have guidelines.
3. Special situation reports
   a. Used to document events that should be reported to local authorities, or to amplify and supplement primary report.
   b. Should be submitted in timely manner.
   c. Should be accurate and objective.
   d. The EMT-F with ambulance endorsement should keep a copy for his own records.
   e. The report, and copies, if appropriate, should be submitted to the authority described by local protocol.
   f. Exposure
   g. Injury
4. Continuous quality improvement
5. Information gathered from the prehospital care report can be used to analyze various aspects of the EMS system.
6. This information can then be used to improve different components of the system and prevent problems from occurring.

MODULE 3 Patient Assessment (Lesson 3-8)

Practical Lab: Patient Assessment

COGNITIVE OBJECTIVES

At the completion of this lesson, the ambulance endorsement student will be able to:
Demonstrate the cognitive objectives of - Initial Assessment.
Demonstrate the cognitive objectives of - Focused History and Physical Exam: Trauma
Demonstrate the cognitive objectives of - Focused History and Physical Exam: Medical
Demonstrate the cognitive objectives of - Detailed Physical Exam.
Demonstrate the cognitive objectives of - On-going Assessment.
Demonstrate the cognitive objectives of - Communications.
Demonstrate the cognitive objectives of - Documentation.

AFFECTIVE OBJECTIVES

At the completion of this lesson, the ambulance endorsement student will be able to:
Demonstrate the affective objectives of - Initial Assessment.
Demonstrate the affective objectives of - Focused History and Physical Exam: Trauma
Demonstrate the affective objectives of - Focused History and Physical Exam: Medical
Demonstrate the affective objectives of - Detailed Physical Exam.
Demonstrate the affective objectives of - On-going Assessment.
Demonstrate the affective objectives of - Communications.
Demonstrate the affective objectives of - Documentation.

PSYCHOMOTOR OBJECTIVES

At the completion of this lesson, the ambulance endorsement student will be able to:
Demonstrate the psychomotor objectives of - Initial Assessment.
Demonstrate the psychomotor objectives of - Focused History and Physical Exam: Trauma
Demonstrate the psychomotor objectives of - Focused History and Physical Exam: Medical
Demonstrate the psychomotor objectives of - Detailed Physical Exam.
Demonstrate the psychomotor objectives of - On-going Assessment.
Demonstrate the psychomotor objectives of - Communications.
Demonstrate the psychomotor objectives of - Documentation.

INSTRUCTOR ACTIVITIES

Supervise student practice.
Reinforce student progress in cognitive, affective, and psychomotor domains.
Redirect students having difficulty with content.
Practical: Evaluate the actions of the Ambulance Endorsement students during role-play, practice or other skills stations to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson.

MODULE 3 Patient Assessment (Lesson 3-9)

Evaluation: Patient Assessment

COGNITIVE OBJECTIVES
At the completion of this lesson, the ambulance endorsement student will be able to:
Demonstrate knowledge of the cognitive objectives of - Initial Assessment.
Demonstrate knowledge of the cognitive objectives of - Focused History and Physical Exam: Trauma.
Demonstrate knowledge of the cognitive objectives of - Focused History and Physical Exam: Medical.
Demonstrate knowledge of the cognitive objectives of - The Detailed Physical Exam.
Demonstrate knowledge of the cognitive objectives of - On-going Assessment.
Demonstrate knowledge of the cognitive objectives of - Communications.
Demonstrate knowledge of the cognitive objectives of - Documentation.

AFFECTIVE OBJECTIVES
At the completion of this lesson, the ambulance endorsement student will be able to:
Demonstrate knowledge of the affective objectives of - Initial Assessment.
Demonstrate knowledge of the affective objectives of - Focused History and Physical Exam: Trauma.
Demonstrate knowledge of the affective objectives of - Focused History and Physical Exam: Medical.
Demonstrate knowledge of the affective objectives of - The Detailed Physical Exam.
Demonstrate knowledge of the affective objectives of - On-going Assessment.
Demonstrate knowledge of the affective objectives of - Communications.
Demonstrate knowledge of the affective objectives of - Documentation.

PSYCHOMOTOR OBJECTIVES
At the completion of this lesson, the ambulance endorsement student will be able to:
Demonstrate knowledge of the psychomotor objectives of - Initial Assessment.
Demonstrate knowledge of the psychomotor objectives of - Focused History and Physical Exam: Trauma.
Demonstrate knowledge of the psychomotor objectives of - Focused History and Physical Exam: Medical.
Demonstrate knowledge of the psychomotor objectives of - The Detailed Physical Exam.
Demonstrate knowledge of the psychomotor objectives of - On-going Assessment.
Demonstrate knowledge of the psychomotor objectives of - Communications.
Demonstrate knowledge of the psychomotor objectives of - Documentation.

INSTRUCTOR ACTIVITIES
Supervise student evaluation.
Reinforce student progress in cognitive, affective, and psychomotor domains.
Redirect students having difficulty with content.

MODULE 4 Medical/Behavioral and Obstetrics/Gynecology (lesson 4-1)

Environmental Emergencies

COGNITIVE OBJECTIVES

At the completion of this lesson, the ambulance endorsement student will be able to:

4-1.1 Describe the various ways that the body loses heat. (C-1)
4-1.2 List the signs and symptoms of exposure to cold. (C-1)
4-1.3 Explain the steps in providing emergency medical care to a patient exposed to cold. (C-1)
4-1.4 List the signs and symptoms of exposure to heat. (C-1)
4-1.5 Explain the steps in providing emergency care to a patient exposed to heat. (C-1)

AFFECTIVE OBJECTIVES

No affective objectives identified.

PSYCHOMOTOR OBJECTIVES

4-1.6 Demonstrate the assessment and emergency medical care of a patient with exposure to cold. (P-1, 2)
4-1.7 Demonstrate the assessment and emergency medical care of a patient with exposure to heat. (P-1, 2)

Declarative (What)

I. Temperature Regulation
   A. Based on heat loss versus heat gained.
      1. Heat loss exceeds heat gained - hypothermia (low body temperature)
         a. Heat loss occurs by:
            (1) Radiation
            (2) Convection
            (3) Conduction
            (4) Evaporation
            (5) Breathing
         b. EMT-F with ambulance endorsement must be aware of methods of heat loss when treating patients with hypothermia to prevent further heat loss.
      2. Heat gained exceeds heat loss - hyperthermia (high body core temperature)
II. Important Questions to Ask Patients Exposed to the Environment
   A. Source
   B. Environment
   C. Loss of consciousness
   D. Effects
      1. General
      2. Local
II. Exposure to Cold
   A. Generalized cold emergency - generalized hypothermia
      1. Predisposing factors

a. Cold environment
    (1) Immersion
    (2) Non-immersion
b. Age
    (1) Very old
    (2) Very young
        (a) Infants and young children are small with large surface area.
        (b) Small muscle mass, so shivering is poor in children and not at all in infants.
        (c) Less body fat
        (d) Younger children need help to protect self. Cannot put on or take off clothes.
c. Medical conditions
    (1) Shock (hypoperfusion)
    (2) Head injury
    (3) Burns
    (4) Generalized infection
    (5) Injuries to the spinal cord
    (6) Diabetes and hypoglycemia
d. Drugs/poisons

2. Signs and symptoms of generalized hypothermia
    a. Environmental conditions of cold exposure
        (1) Obvious exposure
        (2) Subtle exposure
            (a) Ethanol ingestion
            (b) Underlying illness
            (c) Overdose/poisoning
            (d) Major trauma
            (e) Outdoor resuscitation
            (f) Ambient temperature decreased (e.g. home of elderly patient)
    b. Breathing variations
        (1) Early - rapid breathing
        (2) Late - shallow, slow or even absent breathing
    c. Slowly responding pupils
    d. Pulse
        (1) Early - rapid
        (2) Late - slow and barely palpable and/or irregular, or completely absent
    e. Low to absent blood pressure
    f. Skin
        (1) Red - early
        (2) Pale
        (3) Cyanotic - blue-gray
        (4) Stiff/hard
3. Emergency medical care for generalized hypothermia
    a. If the patient is alert and responding appropriately, actively rewarm.
        (1) Warm blankets
        (2) Heat packs or hot water bottles to the groin, axillary and cervical regions.
        (3) Turn the heat up high in the patient compartment of the ambulance.
    b. If the patient is unresponsive or not responding appropriately, rewarm passively:

(1) Warm blankets
(2) Turn the heat up high in the patient compartment of the ambulance.

4. Local cold injuries - localized to specific area of body
   a. When an extremely long or delayed transport is inevitable, then active rapid rewarming should be done.
      (1) Immerse the affected part in warm water bath.
      (2) Monitor the water to ensure it does not cool from the frozen part.
      (3) Continuously stir water.
      (4) Continue until the part is soft and color and sensation return.
      (5) Dress the area with dry sterile dressings. If hand or foot, place dry sterile dressings between fingers or toes.
      (6) Protect against refreezing the warmed part.
      (7) Expect the patient to complain of severe pain.

IV. Exposure to Heat

A. Emergency medical care of heat emergencies - patient with moist, pale, normal to cool temperature skin.
   1. Remove the patient from the hot environment and place in a cool environment (back of air conditioned ambulance).
   2. Administer oxygen if not already done during the initial assessment.
   3. Loosen or remove clothing.
   4. Cool patient by fanning.
   5. Put in supine position with legs elevated.
   6. If patient is responsive and is not nauseated, have the patient drink water.
   7. If the patient is unresponsive or is vomiting, transport to the hospital with patient on his left side.

B. Emergency medical care of heat emergencies - patient with hot, dry or moist skin.
   1. Remove the patient from the hot environment and place in a cool environment (back of air conditioned ambulance with air conditioner running on high).
   2. Remove clothing.
   3. Administer oxygen if not already done during the initial assessment.
   4. Apply cool packs to neck, groin and armpits.
   5. Keep the skin wet by applying water by sponge or wet towels.
   6. Fan aggressively.
   7. Transport immediately.

V. Water-Related Emergencies

VI. Bites and Stings

MODULE 4 Medical/Behavioral and Obstetrics/Gynecology (Lesson 4-2)

Behavioral Emergencies

COGNITIVE OBJECTIVES
At the completion of this lesson, the ambulance endorsement student will be able to:
4-2.1 Discuss the characteristics of an individual's behavior which suggests that the patient is at risk for suicide. (C-1)

AFFECTIVE OBJECTIVES
No Affective Objectives Identified.

PSYCHOMOTOR OBJECTIVES
At the completion of this lesson, the ambulance endorsement student will be able to:
4-2.2 Demonstrate various techniques to safely restrain a patient with a behavioral problem. (P-1, 2)

Declarative (What)

I. Assessment for Suicide Risk
   A. Depression
      1. Sad, tearful
      2. Thoughts of death or taking one's life
   B. Suicidal gestures - the EMT-F with ambulance endorsement must recognize and intervene in self-destructive behavior before the patient commits the act of suicide. Risk factors may include:
      1. Individuals over 40, single, widowed or divorced, alcoholic, depressed.
      2. A defined lethal plan of action, which has been verbalized.
      3. Unusual gathering of articles that can cause death such as purchase of a gun, large volumes of pills, etc.
      4. Previous history of self-destructive behavior.
      5. Recent diagnosis of serious illness.
      6. Recent loss of significant loved one.
      7. Arrest, imprisonment, loss of job
   C. Assessment findings
      1. Patient in an unsafe environment or with unsafe objects in hands.
      2. Displaying of self-destructive behavior during initial assessment or prior to emergency response.
      3. Important questions to be considered
         a. How does the patient feel?
         b. Determine suicidal tendencies?
         c. Is patient a threat to self or others?
         d. Is there a medical problem?
         e. Interventions
   D. Emergency medical care

1. Scene size-up, personal safety
2. Patient assessment
3. Calm the patient - do not leave patient alone
4. Restrain if necessary. Consider need for law enforcement.
5. Transport
6. If overdose, bring medications or drugs found to medical facility.

II. Restraining Patients - restraint should be avoided unless patient is a danger to self and others. When using restraints have police present, if possible, and get approval from medical direction. If restraints must be used, do the following:
   A. Be sure to have adequate help.
   B. Plan your activities.
   C. Use only the force necessary for restraint.
   D. Estimate range of motion of patient's arms and legs and stay beyond range until ready.
   E. Once decision has been made - act quickly.
   F. Have one EMT-Basic talk to patient throughout restraining.
   G. Approach with four persons, one assigned to each limb all at the same time.
   H. Secure limbs together with equipment approved by medical direction.
   I. Turn patient face down on stretcher.
   J. Secure to stretcher with multiple straps.
   K. Cover face with surgical mask if spitting on EMT-F with ambulance endorsement.
   L. Reassess circulation frequently.
   M. Document indication for restraining patients and technique of restraint.
   N. Avoid unnecessary force.

III. Other Behavioral Problems
   A. Always try to talk patient into cooperation.
   B. Do not belittle or threaten patients.
   C. Be calm and patient in your attitude.
   D. Do not agree with disturbed thinking.
   E. Be reassuring.
   F. Avoid arguing with irrational patients.
   G. Suggest appropriate steps to take.
   H. Lower distressing stimuli.
   I. Avoid restraints unless necessary.
   J. Treat with respect.

MODULE 4 Medical/Behavioral and Obstetrics/Gynecology (Lesson 4-3)

Obstetrics/Gynecology

COGNITIVE OBJECTIVES

At the completion of this lesson, the ambulance endorsement student will be able to:

4-3.1 Identify the following structures: Uterus, vagina, fetus, placenta, umbilical cord, amniotic sac, and perineum. (C-1)
4-3.2 State the steps in the predelivery preparation of the mother. (C-1)
4-3.3 State the steps to assist in the delivery. (C-1)
4-3.4 Describe how and when to cut the umbilical cord. (C-1)
4-3.5 Discuss the steps in the delivery of the placenta. (C-1)
4-3.6 List the steps in the emergency medical care of the mother post-delivery. (C-3)

AFFECTIVE OBJECTIVES

At the completion of this lesson, the ambulance endorsement student will be able to:

4-3.7 Explain the rationale for understanding the implications of treating two patients (mother and baby). (A-3)

PSYCHOMOTOR OBJECTIVES

At the completion of this lesson, the ambulance endorsement student will be able to:

4-3.8 Demonstrate infant neonatal procedures. (P-1, 2)
4-3.9 Demonstrate how and when to cut the umbilical cord. (P-1, 2)

Declarative (What)

I. Reproductive anatomy and physiology
   A. Fetus - developing unborn baby
   B. Uterus - organ in which a fetus grows, responsible for labor and expulsion of infant.
   C. Vagina - lower part of the birth canal.
   D. Perineum - skin area between vagina and anus, commonly torn during deliver.
   E. Presenting Part - the part of the infant/fetus that comes first - usually the head.
   F. Abortion - miscarriage - delivery of products of conception early in pregnancy.
II. Contents of a childbirth delivery kit
III. Normal Delivery
   A. Pre-delivery considerations
      1. It is best to transport an expecting mother, unless delivery is expected within a few minutes based on assessment of:
         a. Are you pregnant?
         b. How long have you been pregnant?
         c. Are there contractions or pain?
         d. Any bleeding or discharge?
         e. Is crowning occurring with contractions?
         f. What is the frequency and duration of contractions?

g. Does she feel as if she is having a bowel movement with increasing pressure in the vaginal area?
h. Does she feel the need to push?
i. Rock hard abdomen?

5. Precautions
   a. Recognize your own limitations and transport even if delivery must occur during transport.
   b. If delivery is eminent with crowning, contact medical direction for decision to commit to delivery on site. If delivery does not occur within 10 minutes, contact medical direction for permission to transport.

B. Delivery procedures
1. If the amniotic sac does not break, or has not broken, use a clamp to puncture the sac and push it away from the infant's head and mouth as they appear.
2. As the infant's head is being born, determine if the umbilical cord is around the infant's neck; slip over the shoulder or clamp, cut and unwrap.
3. Keep infant level with vagina until the cord is cut.
4. Assign partner to monitor infant and complete initial care of the newborn.
5. Clamp, tie and cut umbilical cord (between the clamps) as pulsations cease approximately 4 fingers width from infant.
6. Observe for delivery of placenta while preparing mother and infant for transport.
7. When delivered, wrap placenta in towel and put in plastic bag; transport placenta to hospital with mother.
8. Place sterile pad over vaginal opening, lower mother's legs, help her hold them together.
9. Record time of delivery and transport mother, infant and placenta to hospital.

C. Vaginal bleeding following delivery - up to 500 cc of blood loss is normal following delivery.
1. Bleeding continues - check massage technique and transport immediately, providing oxygen and ongoing assessment.
2. Regardless of estimated blood loss, if mother appears in shock (hypoperfusion), treat as such and transport prior to uterine massage. Massage en route.

D. Initial care of the newborn
1. Position, dry, wipe, and wrap newborn in blanket and cover the head.
2. Repeat suctioning.
3. Assessment of infant - normal findings
   a. Appearance - color: no central (trunk) cyanosis
   c. Pulse - greater than 100/min
   d. Grimace - vigorous and crying
   e. Activity - good motion in extremities
   f. Breathing effort - normal, crying
4. Stimulate newborn if not breathing.
   a. Flick soles of feet.
   b. Rub infant's back.

E. Resuscitation of the newborn follows the inverted pyramid (see Appendix K) - after assessment, if signs and symptoms require either cardiac or pulmonary resuscitation, do the following when appropriate:

(1) Breathing effort - if shallow, slow or absent provide artificial ventilations:

a. 60/min
b. Reassess after 30 seconds.
c. If no improvement, continue artificial ventilations and reassessments.

2. Heart rate
   a. If less than 100 beats per minute provide artificial ventilations:
      (1) 60/min
      (2) Reassess after 30 seconds.
      (3) If no improvement continue artificial ventilations and reassessments.
   b. If less than 80 beats per minute and not responding to bag-valve-mask, start chest compressions.
   c. If less than 60 beats per minute, start compressions and artificial ventilations.
3. Color - if central cyanosis is present with spontaneous breathing and an adequate heart rate administer free flow oxygen - administer oxygen (10- 15L) using oxygen tubing held as close as possible to the newborn's face.

MODULE 4 Medical/Behavioral and Obstetrics/Gynecology (Lesson 4-4)

Practical Lab: Medical/Behavioral and Obstetrics/Gynecology

COGNITIVE OBJECTIVES
At the completion of this lesson, the ambulance endorsement student will be able to:
Demonstrate the cognitive objectives of Lesson 4-1: Environmental Emergencies.
Demonstrate the cognitive objectives of Lesson 4-2: Behavioral Emergencies.
Demonstrate the cognitive objectives of Lesson 4-3: Obstetrics/Gynecology.

AFFECTIVE OBJECTIVES
At the completion of this lesson, the ambulance endorsement student will be able to:
Demonstrate the affective objectives of Lesson 4-2: Behavioral Emergencies.
Demonstrate the affective objectives of Lesson 4-3: Obstetrics/Gynecology.

PSYCHOMOTOR OBJECTIVES
At the completion of this lesson, the ambulance endorsement student will be able to:
Demonstrate the psychomotor objectives of Lesson 4-1: Environmental Emergencies.
Demonstrate the psychomotor objectives of Lesson 4-2: Behavioral Emergencies.
Demonstrate the psychomotor objectives of Lesson 4-3: Obstetrics/Gynecology.
The students should practice the kinesthetic activities from Lesson 4-8: Obstetrics/Gynecology.

INSTRUCTOR ACTIVITIES

Supervise student practice.
Reinforce student progress in cognitive, affective, and psychomotor domains.
Redirect students having difficulty with content.
Practical: Evaluate the actions of the Ambulance Endorsement students during role-play, practice or other skills stations to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson.

MODULE 4 Medical/Behavioral and Obstetrics/Gynecology (Lesson 4-5)

Evaluation: Medical/Behavioral and Obstetrics/Gynecology

COGNITIVE OBJECTIVES
At the completion of this lesson, the ambulance endorsement student will be able to:
Demonstrate knowledge of the cognitive objectives of - Environmental Emergencies.
Demonstrate knowledge of the cognitive objectives of - Behavioral Emergencies.
Demonstrate knowledge of the cognitive objectives of - Obstetrics/Gynecological.

AFFECTIVE OBJECTIVES
At the completion of this lesson, the ambulance endorsement student will be able to:
Demonstrate knowledge of the affective objectives of - Behavioral Emergencies.
Demonstrate knowledge of the affective objectives of - Obstetrics/Gynecological.

PSYCHOMOTOR OBJECTIVES
At the completion of this lesson, the ambulance endorsement student will be able to:
Demonstrate knowledge of the psychomotor objectives of - Environmental Emergencies.
Demonstrate knowledge of the psychomotor objectives of - Behavioral Emergencies.
Demonstrate knowledge of the psychomotor objectives of - Obstetrics/Gynecological.

Procedural (How)
1. Written evaluation based on the cognitive and affective objectives of Lessons 4-1 through 4-3.
2. Practical evaluation stations based on the psychomotor objectives of Lessons 4-1 and 4-3.

INSTRUCTOR ACTIVITIES

Supervise student evaluation.
Reinforce student progress in cognitive, affective, and psychomotor domains.
Redirect students having difficulty with content.

MODULE 5 Trauma (Lesson 5-1)

Bleeding and Shock

COGNITIVE OBJECTIVES

At the completion of this lesson, the ambulance endorsement student will be able to:

5-1.1 List signs and symptoms of shock (hypoperfusion). (C-1)

5-1.2 State the steps in the emergency medical care of the patient with signs and symptoms of shock (hypoperfusion). (C-1)

AFFECTIVE OBJECTIVES

At the completion of this lesson, the ambulance endorsement student will be able to:

5-1.3 Explain the sense of urgency to transport patients that are bleeding and show signs of shock (hypoperfusion). (A-1)

PSYCHOMOTOR OBJECTIVES

At the completion of this lesson, the ambulance endorsement student will be able to:

5-1.4 Demonstrate the care of the patient exhibiting signs and symptoms of shock (hypoperfusion). (P-1, 2)

5-1.5 Demonstrate completing a prehospital care report for patient with bleeding and/or shock (hypoperfusion). (P-2)

Declarative (What)

I. Circulatory (Cardiovascular) System Review

D. Anatomy review

1. Heart
2. Arteries
3. Capillaries
4. Veins
5. Blood
6. Physiology
7. Perfusion
   a. Definition - circulation of blood through an organ structure.
   b. Perfusion delivers oxygen and other nutrients to the cells of all organ systems and the removes waste products.
   c. Hypoperfusion is the inadequate circulation of blood through an organ.

II. External Bleeding

A. Body substance isolation must be routinely taken to avoid skin and mucous membrane exposure to body fluids.

B. Severity

4. The sudden loss of one liter (1000cc) of blood in the adult patient, 1/2 liter (500cc) of blood in the child, and 100 - 200cc of the blood volume in an infant is considered serious. (For example, a one year old only has 800cc of blood, therefore 150cc is a major blood loss).
5. The severity of blood loss must be based on the patient's signs and symptoms and the general impression of the amount of blood loss. If the patient exhibits

signs and symptoms of shock (hypoperfusion), the bleeding is to be considered serious.

6. The natural response to bleeding is blood vessel contractions and clotting; however, a serious injury may prevent effective clotting from occurring.
7. Uncontrolled bleeding or significant blood loss leads to shock (hypoperfusion) and possibly death.

C. Emergency medical care of external bleeding
    1. Methods to control external bleeding if direct pressure fails
    a. Splints
        (1) Reduction of motion of bone ends will reduce the amount and aggravation of tissue damage and bleeding associated with a fracture.
        (2) Splinting may allow prompt control of bleeding associated with a fracture.
    b. Pressure Splints
        (1) The use of air pressure splints can help control severe bleeding associated with lacerations of soft tissue or when bleeding is associated with fractures.
    c. Tourniquet
        (1) Use as a last resort to control bleeding of an amputated extremity when all other methods of bleeding control have failed.
        (2) Application of a tourniquet can cause permanent damage to nerves, muscles and blood vessels resulting in the loss of an extremity.
        (3) Procedures for applying a tourniquet:
            (a) Use a bandage 4 inches wide and 6 to 8 layers deep.
            (b) Wrap it around the extremity twice at a point proximal to the bleeding but as distal on the extremity as possible.
            (c) Tie one knot in the bandage and place a stick or rod on top of the knot and tie the ends of the bandage over the stick in a square knot.
            (d) Twist the stick until the bleeding stops.
            (e) Once the bleeding has stopped, secure the stick or rod in position.
            (f) Notify other emergency personnel who may care for the patient that a tourniquet has been applied.
            (g) Document the use of a tourniquet and the time applied in the prehospital patient report.
        (4) A continuously inflated blood pressure cuff may be used as a tourniquet until bleeding stops.
        (5) Precautions with the use of a tourniquet:
            (a) Use a wide bandage and secure tightly.
            (b) Never use wire, rope, a belt, or any other material that may cut into the skin and underlying tissue.
            (c) Do not remove or loosen the tourniquet once it is applied unless directed to do so by medical direction.
            (d) Leave the tourniquet in open view.
            (e) Do not apply a tourniquet directly over any joint, but as close to the injury as possible.

D. Special areas (bleeding from the nose, ears or mouth)
    1. Potential causes:
    a. Injured skull
    b. Facial trauma
    c. Digital trauma (nose picking)

d. Sinusitis and other upper respiratory tract infections
e. Hypertension (high blood pressure)
f. Coagulation disorders

2. Bleeding from the ears or nose may occur because of a skull fracture. If the bleeding is the result of trauma, do not attempt to stop the blood flow. Collect the blood with a loose dressing, which may also limit exposure to sources of infection.
3. Emergency medical care for epistaxis (nosebleed):
   a. Place the patient in a sitting position leaning forward.
   b. Apply direct pressure by pinching the fleshy portion of the nostrils together.
   c. Keep the patient calm and quiet.

III. Internal Bleeding

A. Severity
1. Internal bleeding can result in severe blood loss with resultant shock (hypoperfusion) and subsequent death.
2. Suspicion and severity of internal bleeding should be based on the mechanism of injury and clinical signs and symptoms.

E. Relationship to mechanism of injury
1. Blunt trauma
   a. Falls
   b. Motorcycle crashes
   c. Pedestrian impacts
   d. Automobile collisions
   e. Blast injuries
   f. Look for evidence of contusions, abrasions, deformity, impact marks, and swelling.
2. Penetrating trauma

F. Signs and symptoms of internal bleeding
1. Pain, tenderness, swelling or discoloration of suspected site of injury.
2. Bleeding from the mouth, rectum, or vagina, or other orifice.
3. Vomiting bright red blood or dark coffee ground colored blood.
4. Dark, tarry stools or stools with bright red blood
5. Tender, rigid, and/or distended abdomen
6. Late signs and symptoms of hypovolemic shock (hypoperfusion)
   a. Anxiety, restlessness, combativeness or altered mental status
   b. Weakness, faintness or dizziness
   c. Thirst
   d. Shallow rapid breathing
   e. Rapid weak pulse
   f. Pale, cool, clammy skin
   g. Capillary refill greater than 2 seconds - infant and child patients only
   h. Dropping blood pressure (late sign)
   i. Dilated pupils that is sluggish to respond
   j. Nausea and vomiting

G. Emergency medical care
1. Body substance isolation
2. Maintain airway/artificial ventilation.
3. Administer oxygen if not already done during the initial assessment.
4. If bleeding is suspected in an extremity, control bleeding by direct pressure and application of a splint.

5. Immediate transport is critical for patient with signs and symptoms of shock (hypoperfusion).

IV. Shock (hypoperfusion syndrome)

A. Severity

1. Shock (hypoperfusion) results in inadequate perfusion of cells with oxygen and nutrients and inadequate removal of metabolic waste products.
2. Cell and organ malfunction and death can result from shock
3. (hypoperfusion); therefore, prompt recognition and treatment is vital to patient survival.
4. Peripheral perfusion is drastically reduced due to the reduction in circulating blood volume.
5. Trauma patients develop shock (hypoperfusion) from the loss of blood from both internal and external sites. This type of shock (hypoperfusion)
6. is referred to as hypovolemic or hemorrhagic shock.

B. Signs and symptoms of shock (hypoperfusion)

1. Mental states
   a. Restlessness
   b. Anxiety
   c. Altered mental status
2. Peripheral perfusion
   a. Delayed capillary refill greater than 2 seconds in normal ambient air temperature - infant and child patients only
   b. Weak, thready or absent peripheral pulses
   c. Pale, cool, clammy skin
3. Vital signs
   a. Decreased blood pressure (late sign)
   b. Increased pulse rate (early sign) - weak and thready
   c. Increased breathing rate
      (1) Shallow
      (2) Labored
      (3) Irregular
4. Other signs and symptoms
   a. Dilated pupils
   b. Marked thirst
   c. Nausea and vomiting
   d. Pallor with cyanosis to the lips
5. Infant and child patients can maintain their blood pressure until their blood volume is more than half gone, so by the time their blood pressure drops they are close to death. The infant or child in shock has less reserve.

C. Emergency medical care

1. Body substance isolation.
2. Maintain airway/artificial ventilation. Administer oxygen if indicated.
3. Control any external bleeding.
4. Elevate the lower extremities approximately 8 to 12 inches. If the patient has serious injuries to the pelvis, lower extremities, head, chest, abdomen, neck, or spine, keep the patient supine.
6. Splint any suspected bone or joint injuries.
7. Prevent loss of body heat by covering the patient with a blanket when appropriate.
8. Immediate transport.

MODULE 5 Trauma (Lesson 5-2)

Soft Tissue Injuries

COGNITIVE OBJECTIVES
At the completion of this lesson, the ambulance endorsement student will be able to:
5-2.1 List the types of closed soft tissue injuries. (C-1)
5-2.2 Describe the emergency medical care of the patient with a closed soft tissue injury. (C-1)
5-2.3 Describe the purpose of a bandage. (C-1)
5-2.4 Describe the steps in applying a pressure dressing. (C-1)
5-2.5 Describe the emergency care for a chemical burn. (C-1)
5-2.6 Describe the emergency care for an electrical burn. (C-1)

AFFECTIVE OBJECTIVES
No affective objectives identified.

PSYCHOMOTOR OBJECTIVES
At the completion of this lesson, the ambulance endorsement student will be able to:
5-2.7 Demonstrate the steps in the emergency medical care of closed soft tissue injuries. (P-1, 2)
5-2.8 Demonstrate the steps in the emergency medical care of a patient with a chemical burn. (P-1, 2)
5-2.9 Demonstrate completing a prehospital care report for patients with soft tissue injuries. (P- 2)

Declarative (What)

I. Review the Skin
   A. Function
   B. Layers
II. Injuries
   A. Closed
      1. Types
         a. Contusion (bruise)
            (1) Epidermis remains intact
            (2) Cells are damaged and blood vessels torn in the dermis
            (3) Swelling and pain are typically present
            (4) Blood accumulation causes discoloration
         b. Hematoma
            (1) Collection of blood beneath the skin
            (2) Larger amount of tissue damage as compared to contusion
            (3) Larger vessels are damaged
            (4) May lose one or more liters of blood
         c. Crush injuries
            (1) Crushing force applied to the body
            (2) Can cause internal organ rupture
            (3) Internal bleeding may be severe with shock hypoperfusion)

2. Emergency medical care
    a. Relationship to body substance isolation
        (1) Gloves
        (2) Hand washing
    b. Proper airway/artificial ventilation/oxygenation
    c. If shock (hypoperfusion) or internal bleeding is suspected – Treat for shock (hypoperfusion)
    d. Splint a painful, swollen, deformed extremity.
    e. Transport

B. Open
1. Types
    a. Abrasion
    b. Laceration
    c. Avulsion - flaps of skin or tissue are torn loose or pulled completely off.
    d. Penetration/puncture
    e. Amputations
        (1) Involves the extremities and other body parts
        (2) Massive bleeding may be present or bleeding may be limited
    f. Crush injuries
        (1) Damage to soft tissue and internal organs
        (2) May cause painful, swollen, deformed extremities
        (3) External bleeding may be minimal or absent
        (4) Internal bleeding may be severe
2. Emergency medical care
    a. Relationship to body substance isolation
    b. Maintain proper airway/artificial ventilation/oxygenation.
    c. Management of open soft tissue injuries.
        (1) Keep the patient calm and quiet.
        (2) Treat for shock (hypoperfusion) if signs and symptoms are present.
    d. Special considerations
        (1) Chest injuries - occlusive dressing to open wound
        (2) Abdominal injuries - evisceration (organs protruding through the wound)
            (a) Flex the patient's hips and knees, if uninjured.
        (3) Impaled objects
            (a) Do not remove the impaled object, unless it is through the cheek, it would interfere with chest compressions, **or interferes with transport**.
        (4) Amputations - concerns for re-attachment
            (a) Wrap the amputated part in a sterile dressing.
            (b) Wrap or bag the amputated part in plastic and keep cool.
            (c) Transport the amputated part with the patient.
            (d) Do not complete partial amputations.
            (e) Immobilize to prevent further injury.
        (5) Large open neck injury
            (a) May cause air embolism.
            (b) Cover with an occlusive dressing.
            (c) Compress carotid artery only if necessary to control bleeding.

C. Burns
1. Classification - according to depth
2. Severity
3. Emergency medical care

a. Stop the burning process, initially with water or saline.
b. Remove smoldering clothing and jewelry.
c. Body substance isolation
d. Continually monitor the airway for evidence of closure.
e. Prevent further contamination.
f. Cover the burned area with a dry sterile dressing.
g. Do not use any type of ointment, lotion or antiseptic.
h. Do not break blisters.
i. Transport.
j. Know local protocols for transport to appropriate local facility.

4. Infant and child considerations
5. Chemical burns
   a. Take the necessary scene safety precautions to protect yourself from exposure to hazardous materials.
   b. Wear gloves and eye protection.
   c. Emergency medical care
      (1) Dry powders should be brushed off prior to flushing.
      (2) Immediately begin to flush with large amounts of water.
      (3) Continue flushing the contaminated area when en route to the receiving facility.
      (4) Do not contaminate uninjured areas when flushing.
6. Electrical burns

MODULE 5 Trauma (Lesson 5-3)

Musculoskeletal Care

COGNITIVE OBJECTIVES

At the completion of this lesson, the ambulance endorsement student will be able to:

5-3.1 State the reasons for splinting. (C-1)
5-3.2 List the general rules of splinting. (C-1)
5-3.3 List the complications of splinting. (C-1)

AFFECTIVE OBJECTIVES

At the completion of this lesson, the ambulance endorsement student will be able to:

5-3.4 Explain the rationale for splinting at the scene versus load and go. (A-3)
5-3.5 Explain the rationale for immobilization of the painful, swollen, deformed extremity. (A-3)

PSYCHOMOTOR OBJECTIVES

At the completion of this lesson, the Ambulance Endorsement student will be able to:

5-3.6 Demonstrate completing a prehospital care report for patients with musculoskeletal injuries.(P-2)

Declarative (What)

I. Musculoskeletal Review
   A. Anatomy review
   B. The skeletal system
II. Injuries to bones
   A. Mechanism of injury
   B. Bone or joint injuries
      1. Types
      2. Signs and symptoms
      3. Emergency medical care of bone or joint injuries
         a. Administer oxygen if not already done and indicated.
         b. After life threats have been controlled, splint injuries in preparation for transport.
         c. Elevate the extremity.
III. Splinting
   A. Reasons
      1. Prevent motion of bone fragments, bone ends or angulated joints.
      2. Minimize the following complications:
         a. Damage to muscles, nerves, or blood vessels caused by broken bones.
         b. Conversion of a closed painful, swollen, deformed extremity to an open painful, swollen, deformed extremity.
         c. Restriction of blood flow as a result of bone ends compressing blood vessels.
         d. Excessive bleeding due to tissue damage caused by bone ends.
         e. Increased pain associated with movement of bone ends.
         f. Paralysis of extremities due to a damaged spine.

B. General rules of splinting
    1. Assess pulse, motor, and sensation distal to the injury prior to and following splint application and record findings.
    2. Immobilize the joint above and below the injury.
    3. Remove or cut away clothing.
    4. Cover open wounds with a sterile dressing.
    5. If there is a severe deformity or the distal extremity is cyanotic or lacks pulses, align with gentle traction before splinting.
    7. Do not intentionally replace the protruding bones.
    8. Pad each splint to prevent pressure and discomfort to the patient.
    9. Splint the patient before moving when feasible and no life threats.
    10. When in doubt, splint the injury when feasible and no life threats.
    11. If patient has signs of shock (hypoperfusion), align in normal anatomical position and transport (Total body immobilization. Example: Backboard takes care of all immobilization on emergency basis).
C. Equipment
    1. Rigid splints
    2. Traction splints
    3. Pneumatic splints (air, vacuum)
    4. Improvised splints, pillow
D. Hazards of improper splinting
    1. Compression of nerves, tissues and blood vessels from the splint
    2. Delay in transport of a patient with life threatening injury
    3. Splint applied too tight on the extremity reducing distal circulation
    4. Aggravation of the bone or joint injury
    5. Cause or aggravate tissue, nerve, vessel or muscle damage from excessive bone or joint movement
E. Special considerations of splinting
    1. Long bone splinting procedure
        a. Body substance isolation
        b. Apply manual stabilization.
        c. Assess pulse, motor and sensory function.
        d. If there is a severe deformity or the distal extremity is cyanotic or lacks pulses, align with gentle traction before splinting.
        e. Measure splint.
        f. Apply splint immobilizing the bone and joint above and below the injury.
        g. Secure entire injured extremity.
        h. Immobilize hand/foot in position of function.
        i. Reassess pulse, motor, and sensation after application of splint and record.
    2. Splinting a joint injury
        a. Body substance isolation
        b. Apply manual stabilization.
        c. Assess pulse, motor and sensory function.
        d. Align with gentle traction if distal extremity is cyanotic or lacks pulses and no resistance is met.
        e. Immobilize the site of injury.
        f. Immobilize bone above and below the site of injury.
        g. Reassess pulse, motor and sensation after application of splint and record.
    3. Traction splinting

a. Indications for use is a painful, swollen, deformed mid-thigh with no joint or lower leg injury.
b. Contraindications of the use of a traction splint
   (1) Injury is close to the knee
   (2) Injury to the knee exists
   (3) Injury to the hip
   (4) Injured pelvis
   (5) Partial amputation or avulsion with bone separation, distal limb is connected only by marginal tissue. Traction would risk separation.
   (6) Lower leg or ankle injury.
c. Traction splinting procedure
   (1) Assess pulse, motor, and sensation distal to the injury and record.
   (2) Body substance isolation
   (3) Perform manual stabilization of the injured leg.
   (4) Apply manual traction - required when using a bi-polar traction splint.
   (5) Prepare/adjust splint to proper length.
   (6) Position splint under injured leg.
   (7) Apply proximal securing device (ischial strap).
   (8) Apply distal securing device (ankle hitch).
   (9) Apply mechanical traction.
   (10) Position/secure support straps.
   (11) Re-evaluate proximal/distal securing devices.
   (12) Reassess pulses, motor, sensation distal to the injury after application of the splint and record.
   (13) Secure torso to the long board to immobilize hip.
   (14) Secure splint to the long board to prevent movement of
   (15) splint.

Procedural (How)

1. Demonstrate splinting procedures relevant to the general rules of splinting using: Rigid splints, traction splints, pneumatic splints, and improvised splints.
2. Demonstrate procedure for splinting an injury with distal cyanosis or lacking a distal pulse.

Contextual (When, Where, Why)

Injuries to bones and joints require splinting prior to the movement of the patient unless life threatening injuries are present. If life-threatening injuries are present, splinting should be done en route to the receiving facility when possible.

Failure to splint or improperly splinting a bone or joint injury can result in damage to soft tissue, organs, nerves, muscles; increased bleeding associated with the injury; permanent damage or disability; conversion of a closed injury to an open injury; and an increase in pain.

STUDENT ACTIVITIES

Visual (See)

1. The student should see a demonstration of splinting procedures relevant to the general rules of splinting using: Rigid splints, traction splints, pneumatic splints, and improvised splints.
2. The student should see a demonstration of the procedure for splinting an injury with distal cyanosis or lacking a distal pulse.

Kinesthetic (Do)

1. The student should practice splinting procedures relevant to the general rules of splinting using: Rigid splints, traction splints, pneumatic splints, and improvised splints.
2. The student should practice procedure for splinting an injury with distal cyanosis or lacking a distal pulse.
3. The student should practice completing a prehospital care report for patients with musculoskeletal injuries.

INSTRUCTOR ACTIVITIES

Supervise student practice.
Reinforce student progress in cognitive, affective, and psychomotor domains.
Redirect students having difficulty with content.

MODULE 5 Trauma (Lesson 5-4)

Injuries to the Head and Spine

COGNITIVE OBJECTIVES

At the completion of this lesson, the ambulance endorsement student will be able to:

5-4.1 Describe the implications of not properly caring for potential spine injuries. (C-1)
5-4.2 Relate the airway emergency medical care techniques to the patient with a suspected spine injury. (C-3)
5-4.3 Describe how to stabilize the cervical spine. (C-1)
5-4.4 Discuss indications for sizing and using a cervical spine immobilization device. (C-1)
5-4.5 Establish the relationship between airway management and the patient with head and spine injuries. (C-1)
5-4.6 Describe a method for sizing a cervical spine immobilization device. (C-1)
5-4.7 Describe how to log roll a patient with a suspected spine injury. (C-1)
5-4.8 Describe how to secure a patient to a long spine board. (C-1)
5-4.9 List instances when a short spine board should be used. (C-1)
5-4.10 Describe how to immobilize a patient using a short spine board. (C-1)

AFFECTIVE OBJECTIVES

At the completion of this lesson, the ambulance endorsement student will be able to:

5-4.11 Explain the rationale for immobilization of the entire spine when a cervical spine injury is suspected. (A-3)
5-4.12 Explain the rationale for utilizing immobilization methods apart from the straps on the cots. (A-3)
5-4.13 Explain the rationale for utilizing a short spine immobilization device when moving a patient from the sitting to the supine position. (A-3)

PSYCHOMOTOR OBJECTIVES

At the completion of this lesson, the ambulance endorsement student will be able to:

5-4.14 Demonstrate the four-person log roll for a patient with a suspected spinal cord injury. (P-1, 2)
5-4.15 Demonstrate how to log roll a patient with a suspected spinal cord injury using two people. (P-1, 2)
5-4.16 Demonstrate securing a patient to a long spine board. (P-1, 2)
5-4.17 Demonstrate using the short board immobilization technique. (P-1, 2)

Declarative (What)

I. The Nervous System Review
   A. Components
   B. Actions
II. The Skeletal System
   A. Functions
   B. Components
      1. Skull
      2. Spinal column

a. 33 bones
b. Surrounds and protects the spinal cord.

III. Injuries to the Spine

A. Mechanism of injury
1. Compression
a. Falls
b. Diving accidents
c. Motor vehicle accidents
2. Excessive flexion, extension, rotation
3. Lateral bending
4. Distraction
a. Pulling apart of the spine
b. Hangings
5. Maintain a high index of suspicion
a. Motor vehicle crashes
b. Pedestrian - vehicle collisions
c. Falls
d. Blunt trauma
e. Penetrating trauma to head, neck, or torso
f. Motorcycle crashes
g. Hangings
h. Diving accidents
i. Unconscious trauma victims

B. Signs and symptoms
1. Ability to walk, move extremities or feel sensation; or lack of pain to spinal column does not rule out the possibility of spinal column or cord damage.
2. Tell the patient not to move while asking questions.
3. Pain independent of movement or palpation
4. Obvious deformity of the spine upon palpation
5. Soft tissue injuries associated with trauma

C. Assessing the potential spine injured patient
1. Responsive patient
a. Mechanism of injury
b. Questions to ask
(1) Does your neck or back hurt?
(2) What happened?
(3) Where does it hurt?
(4) Can you move your hands and feet?
(5) Can you feel me touching your fingers?
(6) Can you feel me touching your toes?
c. Inspect for contusions, deformities, lacerations, punctures, penetrations, swelling.
d. Palpate for areas of tenderness or deformity.
e. Assess equality of strength of extremities
(1) Hand grip
(2) Gently push feet against hands
2. Unresponsive patient
a. Mechanism of injury
b. Initial assessment
c. Inspect for:

(1) Contusions
(2) Deformities
(3) Lacerations
(4) Punctures/penetrations
(5) Swelling

d. Palpate for areas of tenderness or deformity.
e. Obtain information from others at the scene to determine information relevant to mechanism of injury or patient mentalstatus prior to the EMT-F with ambulance endorsement's arrival.

D. Emergency medical care
1. Establish and maintain in-line immobilization.
   a. Place the head in a neutral in-line position unless the patient complains of pain or the head is not easily moved into position.
   b. Place head in alignment with spine.
   c. Maintain constant manual in-line immobilization until the patient is properly secured to a backboard with the head immobilized.
2. Perform initial assessment.
3. Assess pulse, motor and sensation in all extremities.
4. Assess the cervical region and neck.
5. Apply a rigid, cervical immobilization device.
   a. Properly size the cervical immobilization device. If it doesn't fit use a rolled towel and tape to the board and have rescuer hold the head manually.
   b. An improperly fit immobilization device will do more harm than good.
6. If found in a lying position, immobilize the patient to a long spine board.
   a. Position the device.
   b. Move the patient onto the device by log rolling.
      (1) One EMT-F with ambulance endorsement must maintain in-line immobilization of the head and spine.
      (2) EMT-F with ambulance endorsement at the head directs the movement of the patient.
      (3) One to three other EMT-F with ambulance endorsements controls the movement of the rest of the body.
      (4) Quickly assess posterior body if not already done in the focused history and physical exam.
      (5) Position the long spine board under the patient.
      (6) Place patient onto the board at the command of the EMT-F with ambulance endorsement holding in-line immobilization using a slide, proper lift, log roll or scoop stretcher so as to limit movement to the minimum amount possible. Which method to use must be decided based upon the situation, scene and available resources.
      (7) Pad voids between the patient and the board.
         (a) Adult
            i) Under the head
            ii) Voids under torso. Be careful of extra movement.
         (b) Infant and child - pad under the shoulders to the toes to establish a neutral position.
      (8) Immobilize torso to the board.
      (9) Immobilize the patient's head to the board.
      (10) Secure the legs to the board.
      (11) Reassess pulses, motor and sensation and record.

7. If the patient is found in a sitting position in a chair, immobilize with a short spine immobilization device. Exception: If the patient must be removed urgently because of his injuries, the need to gain access to others, or dangers at the scene, he must then be lowered directly onto a long board and removed with manual immobilization provided.
    a. Position device behind the patient.
    b. Secure the device to the patient's torso.
    c. Evaluate torso fixation and adjust as necessary without excessive movement of the patient.
    d. Evaluate and pad behind the patient's head as necessary to maintain neutral in-line immobilization.
    e. Secure the patient's head to the device.
    f. Insert a long board under the patient's buttocks and rotate and lower him to it. If not possible, lower him to the long spine board.
    g. Reassess pulses, motor and sensory in all extremities and record.
8. If the patient is found in a standing position, immobilize the patient to a long spine board.
    a. Position the device behind patient.
    b. Move the patient onto the device by:
        (1) One rescuer on each side of the patient, one additional rescuer at the foot facing the patient.
        (2) The rescuers on both sides of the patient reach with the hand closest to the patient under the arm to grasp the board, and use the hand farthest from the patient to secure the head.
        (3) Once the position is assured, they place the leg closest to the board behind the board and begin to tip the top backward. The rescuer at the foot of the board secures the board and the patient to prevent them from sliding, and the board is brought into a level horizontal position.
9. If the patient is critically injured, perform a rapid extrication.
10. Transport the patient immediately.
    a. Bring body into alignment.
    b. Transfer to long board without short spine board.

IV. Injuries to the Brain and Skull
    A. Head injuries
    B. Related non-traumatic conditions
    C. Skull injury - signs and symptoms
    D. Head injury
    E. Open head injury
    F. Emergency medical care

V. Immobilization
    A. Cervical spine immobilization devices
        1. Indications
            a. Any suspected injury to the spine based on mechanism of injury, history or signs and symptoms.
            b. Use in conjunction with short and long backboards.
        2. Sizing
            a. Various types of rigid cervical immobilization devices exist; therefore, sizing is based on the specific design of the device.
            b. An improperly sized immobilization device has a potential for further injury.

c. Do not obstruct the airway with the placement of a cervical immobilization device.
d. If it doesn't fit use a rolled towel and tape to the board and manually support the head. An improperly fit device will do more harm than good.

3. Precautions
   a. Cervical immobilization devices alone do not provide adequate inline immobilization.
   b. Manual immobilization must always be used with a cervical immobilization device until the head is secured to a board.

B. Short backboards
1. Several different types of short board immobilization devices exist.
   a. Vest type devices
   b. Rigid short board
2. Provides stabilization and immobilization to the head, neck and torso.
3. Used to immobilize non-critical sitting patients with suspected spinal injuries.
4. General application
   a. Start manual in-line immobilization.
   b. Assess pulses, motor and sensory function in all extremities.
   c. Assess the cervical area.
   d. Apply a cervical immobilization device.
   e. Position short board immobilization device behind the patient.
   f. Secure the device to the patient's torso.
   g. Evaluate torso and groin fixation and adjust as necessary without excessive movement of the patient.
   h. Evaluate and pad behind the patient's head as necessary to maintain neutral in-line immobilization.
   i. Secure the patient's head to the device.
   j. Release manual immobilization of head.
   k. Rotate or lift the patient to the long spine board.
   l. Immobilize patient to long spine board.
   m. Reassess pulses, motor and sensory function in all extremities.

C. Long backboards (Full body spinal immobilization devices)
1. Several different types of long board immobilization devices exist.
2. Provide stabilization and immobilization to the head, neck and torso, pelvis and extremities.
3. Used to immobilize patients found in a lying, standing, or sitting position.
4. Sometimes used in conjunction with short backboards.
5. General application
   a. Start manual in-line immobilization.
   b. Assess pulses, motor and sensory function in all extremities.
   c. Assess the cervical area.
   d. Apply a cervical immobilization device.
   e. Position the device.
   f. Move the patient onto the device by log roll, suitable lift or slide, or scoop stretcher. A log roll is:
      (1) One EMT-F with ambulance endorsement must maintain in-line immobilization.
      (2) EMT-F with ambulance endorsement at the head directs the movement of the patient.

(3) One to three other EMT-F with ambulance endorsements controls the movement of the rest of the body.
(4) Quickly assess posterior body if not already done in the initial assessment.
(5) Position the long spine board under the patient.
(6) Roll patient onto the board at the command of the EMT-f with ambulance endorsement holding in-line immobilization.

g. Pad voids between the patient and the board.
(1) Adult
(a) Under the head as needed
(b) Under the torso as needed
(2) Infant and child - pad under the shoulders to the toes to establish a neutral position.

h. Immobilize torso to the board by applying straps across the chest and pelvis and adjust as needed.
i. Immobilize the patient's head to the board.
j. Fasten legs, proximal to and distal to the knees.
k. Reassess pulses, motor and sensation and record.

VI. Special Considerations

Procedural (How)

1. Show audio-visual aids or materials of related mechanism of injury to potential injuries of the head and spine.
2. Show audio-visual aids or materials of potential signs and symptoms of a potential spine injury.
3. Demonstrate the method of determining if a responsive patient may have a spine injury.
4. Demonstrate the airway emergency medical care techniques for the patient with a suspected spinal cord injury.
5. Demonstrate methods for sizing various cervical spine immobilization devices.
6. Demonstrate how to stabilize the cervical spine.
7. Demonstrate how to immobilize a patient using a short spine board.
8. Demonstrate how to log roll a patient with a suspected spine injury.
9. Demonstrate how to secure a patient to a long spine board.

Kinesthetic (Do)

1. The student should practice opening the airway in a patient with suspected spinal cord injury.
2. The student should practice evaluating a responsive patient with a suspected spinal cord injury.
3. The student should practice stabilization of the cervical spine.
4. The student should practice using the short board immobilization technique.
5. The student should practice the four person log roll for a patient with a suspected spinal cord injury.
6. The student should practice how to log roll a patient with a suspected spinal cord injury using two people.
7. The student should practice securing a patient to a long spine board.
8. The student should practice preferred methods for stabilization of the head.
9. The student should practice alternative methods for stabilization of the head.
10. The student should practice completing a prehospital care report for patients with head and spinal injuries.

MODULE 5 Trauma (Lesson 5-5)

Practical Lab: Trauma

COGNITIVE OBJECTIVES
At the completion of this lesson, the ambulance endorsement student will be able to:
Demonstrate the cognitive objectives of Lesson 5-1: Bleeding and Shock.
Demonstrate the cognitive objectives of Lesson 5-2: Soft Tissue Injuries.
Demonstrate the cognitive objectives of Lesson 5-3: Musculoskeletal Care.
Demonstrate the cognitive objectives of Lesson 5-4: Injuries to the Head and Spine.

AFFECTIVE OBJECTIVES
At the completion of this lesson, the ambulance endorsement student will be able to:
Demonstrate the affective objectives of Lesson 5-1: Bleeding and Shock.
Demonstrate the affective objectives of Lesson 5-3: Musculoskeletal Care.
Demonstrate the affective objectives of Lesson 5-4: Injuries to the Head and Spine.

PSYCHOMOTOR OBJECTIVES
At the completion of this lesson, the ambulance endorsement student will be able to:
Demonstrate the psychomotor objectives of Lesson 5-1: Bleeding and Shock.
Demonstrate the psychomotor objectives of Lesson 5-2: Soft Tissue Injuries.
Demonstrate the psychomotor objectives of Lesson 5-3: Musculoskeletal Care.
Demonstrate the psychomotor objectives of Lesson 5-4: Injuries to the Head and Spine.

Kinesthetic (Do)

The students should practice the kinesthetic activities from Lesson 5-1: Bleeding and Shock.
The students should practice the kinesthetic activities from Lesson 5-2: Soft Tissue Injuries.
The students should practice the kinesthetic activities from Lesson 5-3: Musculoskeletal Care.
The students should practice the kinesthetic activities from Lesson 5-4: Injuries to the Head and Spine.

INSTRUCTOR ACTIVITIES

Supervise student practice.
Reinforce student progress in cognitive, affective, and psychomotor domains.
Redirect students having difficulty with content.

MODULE 5 Trauma (Lesson 5-6)

Evaluation: Trauma

COGNITIVE OBJECTIVES
At the completion of this lesson, the ambulance endorsement student will be able to:
Demonstrate knowledge of the cognitive objectives of Lesson 5-1: Bleeding and Shock.
Demonstrate knowledge of the cognitive objectives of Lesson 5-2: Soft Tissue Injuries.
Demonstrate knowledge of the cognitive objectives of Lesson 5-3: Musculoskeletal Care.
Demonstrate knowledge of the cognitive objectives of Lesson 5-4: Injuries to the Head and Spine.

AFFECTIVE OBJECTIVES
At the completion of this lesson, the ambulance endorsement student will be able to:
Demonstrate knowledge of the affective objectives of Lesson 5-1: Bleeding and Shock.
Demonstrate knowledge of the affective objectives of Lesson 5-3: Musculoskeletal Care.
Demonstrate knowledge of the affective objectives of Lesson 5-4: Injuries to the Head and Spine.

PSYCHOMOTOR OBJECTIVES
At the completion of this lesson, the ambulance endorsement student will be able to:
Demonstrate knowledge of the psychomotor objectives of Lesson 5-1: Bleeding and Shock.
Demonstrate knowledge of the psychomotor objectives of Lesson 5-2: Soft Tissue Injuries.
Demonstrate knowledge of the psychomotor objectives of Lesson 5-3: Musculoskeletal Care.
Demonstrate knowledge of the psychomotor objectives of Lesson 5-4: Injuries to the Head and Spine.

Procedural (How)

1. Written evaluation based on the cognitive and affective objectives of Lessons 5-1 through 5-4.
2. Practical evaluation stations based on the psychomotor objectives of Lessons 5-1 through 5-4.

MODULE 6 Infants and Children (Lesson 6-1)

Infants and Children

COGNITIVE OBJECTIVES
No Cognitive Objectives Identified.

AFFECTIVE OBJECTIVES
No Affective Objectives Identified.

PSYCHOMOTOR OBJECTIVES
At the completion of this lesson, the ambulance endorsement student will be able to:
6-1.1 Demonstrate bag-valve-mask artificial ventilations for the infant. (P-1, 2)
6-1.2 Demonstrate bag-valve-mask artificial ventilations for the child. (P-1, 2)
6-1.3 Demonstrate oxygen delivery for the infant and child. (P-1, 2)

Declarative (What)

I. Preparatory
II. Airway
III. Oxygen Therapy
    A. Oxygen delivery
        1. Use of bag-valve-mask
            a. Squeeze bag slowly and evenly enough to make chest rise adequately.
            b. Rates for child and infant are 20 breaths per minute.
            c. Provide oxygen at 100% concentration by using an oxygen reservoir.
IV. Assessment
V. Common Problems in Infants and Children
    A. Airway obstructions
        1. Partial airway obstruction - infant or child who is alert and sitting.
            a. Emergency medical care
                (1) Transport
                (2) Limited exam. Do not assess blood pressure.
        2. Complete obstruction and altered mental status or cyanosis and partial obstruction.
            a. Attempt artificial ventilations with a bag-valve-mask and good seal.
    B. Respiratory emergencies
        1. Emergency medical care
            a. Provide oxygen to all children with respiratory emergencies.
            b. Provide oxygen and assist ventilation for severe respiratory distress.
                (1) Respiratory distress and altered mental status
                (2) Presence of cyanosis with oxygen
                (3) Respiratory distress with poor muscle tone
                (4) Respiratory failure
                (5) Provide oxygen and ventilate with bag-valve-mask for respiratory arrest.
    C. Seizures
        1. Emergency medical care

a. Provide oxygen and if in respiratory arrest or severe respiratory distress, assure airway position and patency and ventilate with bag-valve-mask.
b. Transport. Although brief seizures are not harmful, there may be a more dangerous underlying condition.

2. Seizures can be caused by head injury.
3. Inadequate breathing and/or altered mental status may occur following a seizure.

D. Altered mental status
1. Caused by a variety of conditions
a. Hypoperfusion (shock)
2. Emergency medical care
a. Transport.

E. Poisonings

F. Fever

G. Shock (hypoperfusion)
1. Rarely a primary cardiac event.
a. Common:
(1) Diarrhea and dehydration
(2) Trauma
(3) Vomiting
(4) Blood loss
(5) Infection
(6) Abdominal injuries
b. Less common:
(1) Allergic reactions
(2) Poisoning
(3) Cardiac
2. Signs and symptoms
a. Rapid respiratory rate
b. Pale, cool, clammy skin
c. Weak or absent peripheral pulses
d. Delayed capillary refill
e. Decreased urine output. Measured by asking parents about diaper wetting and looking at diaper.
f. Mental status changes
g. Absence of tears, even when crying
3. Emergency medical care
a. Assure airway/oxygen.
b. Be prepared to artificially ventilate.
c. Manage bleeding if present.
d. Elevate legs.
e. Keep warm.
f. Transport. Note need for rapid transport of infant and child patients with secondary exam completed en route, if time permits.

H. Near drowning
1. Artificial ventilation is top priority.
2. Consider possibility of trauma.
3. Consider possibility of hypothermia.
4. Consider possible ingestion, especially alcohol.
5. Protect airway, suction if necessary.

6. Secondary drowning syndrome - Deterioration after breathing normally from minutes to hours after event. All near drowning victims should be transported to the hospital.

I. Sudden Infant Death Syndrome (SIDS)

VI. Trauma

A. Injuries are the number one cause of death in infants and children.
B. Blunt injury is most common.
C. Specific body systems
   1. Extremities
D. Other trauma considerations
E. Emergency medical care
   1. Assist ventilations for severe respiratory distress and ventilate with a bag-valve-mask for respiratory arrest.
   2. Transport immediately.

VII. Infants and Children with Special Needs

A. This can include many different types of children.
B. Often these children will be at home, technologically dependent.
C. Central Lines
D. Gastrostomy tubes and gastric feeding
E. Shunts

VIII. Family Response

A. A child cannot be cared for in isolation from the family; therefore, you have multiple patients.
   1. Striving for calm, supportive interaction with family will result in improved ability to deal with the child.
   2. Calm parents = calm child; agitated parents = agitated child
   3. Anxiety arises from concern over child's pain; fear for child's well being
   4. Worsened by sense of helplessness
B. Parent may respond to EMT-F with ambulance endorsement with anger or hysteria.
C. Parents should remain part of the care unless child is not aware or medical conditions require separation.
D. Parents should be instructed to calm child; can maintain position of comfort and/or hold oxygen.
E. Parents may not have medical training, but they are experts on what is normal or abnormal for their children and what will have a calming effect.

IX. Provider Response

A. Anxiety from lack of experience with treating children as well as fear of failure.
B. Skills can be learned and applied to children.
C. Stress from identifying patients with their own children.
D. Provider should realize that much of what they learned about adults applies to children; they need to remember the differences.
E. Infrequent encounters with sick children; advance preparation is important (practice with equipment and examining children).

MODULE 6 Infants and Children (Lesson 6-2)

Practical Lab: Infants and Children

COGNITIVE OBJECTIVES
At the completion of this lesson, the ambulance endorsement student will be able to:
Demonstrate the cognitive objectives of Lesson 6-1: Infants and Children.

AFFECTIVE OBJECTIVES
At the completion of this lesson, the ambulance endorsement student will be able to:
Demonstrate the affective objectives of Lesson 6-1: Infants and Children.

PSYCHOMOTOR OBJECTIVES
At the completion of this lesson, the ambulance endorsement student will be able to:
Demonstrate the psychomotor objectives of Lesson 6-1: Infants and Children.

Procedural (How)

Instructor should demonstrate the procedural activities from Lesson 6-1: Infants and Children.

Kinesthetic (Do)

The students should practice the kinesthetic activities from Lesson 6-1: Infants and Children.

INSTRUCTOR ACTIVITIES
Supervise student practice.
Reinforce student progress in cognitive, affective, and psychomotor domains.
Redirect students having difficulty with content.

MODULE 6 Infants and Children (Lesson 6-3)

Evaluation: Infants and Children

COGNITIVE OBJECTIVES
At the completion of this lesson, the ambulance endorsement student will be able to:
Demonstrate knowledge of the cognitive objectives of Lesson 6-1: Infants and Children

AFFECTIVE OBJECTIVES
At the completion of this lesson, the ambulance endorsement student will be able to:
Demonstrate knowledge of the affective objectives of Lesson 6-1: Infants and Children.

PSYCHOMOTOR OBJECTIVES
At the completion of this lesson, the ambulance endorsement student will be able to:
Demonstrate knowledge of the psychomotor objectives of Lesson 6-1: Infants and Children.

Procedural (How)

1. Written evaluation based on the cognitive and affective objectives of Lesson 6-1.
2. Practical evaluation stations based on the psychomotor objectives of Lesson 6-1.

INSTRUCTOR ACTIVITIES

Supervise student evaluation.
Reinforce student progress in cognitive, affective, and psychomotor domains.
Redirect students having difficulty with content.

MODULE 7 Operations (Lesson 7-1)

Ambulance Operations

COGNITIVE OBJECTIVES

At the completion of this lesson, the ambulance endorsement student will be able to:

7-1.1 Discuss the medical and non-medical equipment needed to respond to a call. (C-1)

7-1.2 Describe the general provisions of state laws relating to the operation of the ambulance and privileges in any or all of the following categories:(C-1)

- Speed
- Warning lights
- Sirens
- Right-of-way
- Parking
- Turning

7-1.3 List contributing factors to unsafe driving conditions. (C-1)

7-1.4 Describe the considerations that should by given to:
Request for escorts.
Following an escort vehicle
Intersections (C-1)

7-1.5 Discuss "Due Regard For Safety of All Others" while operating an emergency vehicle. (C-1)

7-1.6 State what information is essential in order to respond to a call. (C-1)

7-1.7 Discuss various situations that may affect response to a call. (C-1)

7-1.8 Differentiate between the various methods of moving a patient to the unit based upon injury or illness.(C-3)

7-1.9 Apply the components of the essential patient information in a written report. (C-2)

7-1.10 Summarize the importance of preparing the unit for the next response. (C-1)

7-1.11 Identify what is essential for completion of a call. (C-1)

7-1.12 Distinguish among the terms cleaning, disinfection, high-level disinfection, and sterilization. (C-3)

7-1.13 Describe how to clean or disinfect items following patient care. (C-1)

AFFECTIVE OBJECTIVES

At the completion of this lesson, the ambulance endorsement student will be able to:

7-1.14 Explain the rationale for appropriate report of patient information. (A-3)

7-1.15 Explain the rationale for having the unit prepared to respond. (A-3)

PSYCHOMOTOR OBJECTIVES

No psychomotor objectives identified.

Declarative (What)

I. Phases of an ambulance call
   A. Preparation for the call

1. Equipment
    a. Medical
        (1) Patient transfer equipment
        (2) Splinting supplies
        (3) Childbirth supplies
        (4) Medications
        (5) Automated external defibrillator
    b. Non-medical
2. Personnel
3. Daily inspections
    a. Inspection of vehicle systems
        (1) Fuel
        (2) Oil
        (3) Engine cooling system
        (4) Battery
        (5) Brakes
        (6) Wheels and tires
        (7) Headlights
        (8) Stoplights
        (9) Turn signals
        (10) Emergency warning lights
        (11) Wipers
        (12) Horn
        (13) Siren
        (14) Doors closing and latching
        (15) Communication system
        (16) Air conditioning/heating system
        (17) Ventilation system
    b. Equipment
        (1) Checked and maintained
        (2) Restocked and repaired
        (3) Batteries for defibrillator, suction, oxygen, etc.
4. Utilization of safety precautions and seat belts.

B. Dispatch

C. En route
1. Driving the ambulance
    b. Emergency vehicle operations
        (1) It is recommended, and in some states mandated, that the driver of an emergency vehicle attend an approved driving course.
        (2) Characteristics of good ambulance operators
            (a) Physically fit
            (b) Mentally fit
            (c) Able to perform under stress
            (d) Positive attitude about abilities
            (e) Tolerant of other drivers
        (3) Safe driving is an important phase in the emergency medical care of the ill or injured patient.
            (a) The driver and all passengers should wear safety belts.
            (b) Become familiar with the characteristics of your vehicle.
            (c) Be alert to changes in weather and road conditions.

(d) Exercise caution in use of red lights and siren.
(e) Select appropriate route.
(f) Maintain safe following distance.
(g) Drive with due regard for safety of all others.
(h) Know appropriateness of using lights and sirens.
(i) Headlights are the most visible warning device on an emergency vehicle.

1. Obtain additional information from dispatch.
2. Assign personnel to specific duties.
3. Assess specific equipment needs.
4. Positioning the unit
   (1) For safety
      (a) Uphill from leaking hazards
      (b) 100 feet from wreckage
         1) In front of the wreckage or,
         2) Beyond the wreckage
      (c) Set parking brake
      (d) Utilize warning lights
      (e) Shut off headlights unless there is a need to illuminate the scene.
   (2) To exit the scene. Avoid parking in a location that will hamper exit from the scene.
5. Laws, regulations and ordinances - review state and local laws, regulations or ordinances in the area relative to the operations of an emergency vehicle, including as needed:
   (1) Vehicle parking or standing
   (2) Procedures at red lights, stop signs and intersections
   (3) Regulations regarding speed limits
   (4) Direction of flow or specified turns
   (5) Emergency or disaster routes
   (6) Use of audible warning devices
   (7) Use of visual warning devices
   (8) School buses
6. Escorts and multiple vehicle response
   (1) Extremely dangerous
   (2) Used only if unfamiliar with location of patient or receiving facility
      (a) No vehicle should use lights or siren.
      (b) Provide a safe following distance.
      (c) Recognize hazards of multiple vehicle response.
7. Intersection crashes - most common type
   (1) Motorist arriving at intersection as light changes and does not stop.
   (2) Multiple emergency vehicles following closely and waiting motorist does not expect more than one.
   (3) Vision is obstructed by vehicles.

D. Arrival at scene
   1. Notify dispatch
   2. Size-up
   3. Actions at scene.
      a. Goal of transport in mind

E. Transferring the patient to the ambulance
   1. Preparing the patient for transport

a. Completion of critical interventions
b. Check dressings and splints.
c. Patient covered and secured to moving device

3. Lifting and moving are accomplished using the guidelines of the lifting/moving module (Module 1, Lesson 1-5).

F. En route to the receiving facility
1. Notify dispatch.
2. On-going assessment should be continued.
3. Additional vital sign measurements should be obtained.
4. Notify receiving facility.
5. Reassure patient.
6. Complete prehospital care reports.

G. At receiving facility
1. Notify dispatch.
2. Transferring the patient at the facility
a. Reports
(1) Complete verbal report is given at bedside.
(2) Complete written report is completed and left prior to returning to service.
b. Lifting and moving is accomplished using the guidelines of the lifting/moving module (Module 1, Lesson 1-5).

H. En route to station
1. At station or receiving facility, notify dispatch.
2. Prepare for the next call.
a. Clean and disinfect the ambulance as needed.
b. Clean and disinfect ambulance equipment.
c. Restock the disposable supplies.

I. Post run
1. Refuel unit.
2. File reports.
3. Complete cleaning and disinfection procedures.
4. Notify dispatch.

II. Air Medical Consideration

MODULE 7 Operations (Lesson 7-2)

Gaining Access

COGNITIVE OBJECTIVES
At the completion of this lesson, the ambulance endorsement student will be able to:
7-2.1 Describe the purpose of extrication. (C-1)
7-2.2 Discuss the role of the EMT-F with ambulance endorsement in extrication. (C-1)
7-2.3 Identify what equipment for personal safety is required for the EMT-F with ambulance endorsement. (C-1)
7-2.4 Define the fundamental components of extrication. (C-1)
7-2.5 State the steps that should be taken to protect the patient during extrication. (C-1)
7-2.6 Evaluate various methods of gaining access to the patient. (C-3)
7-2.7 Distinguish between simple and complex access. (C-3)

AFFECTIVE OBJECTIVES
No affective objectives identified.

PSYCHOMOTOR OBJECTIVES
No psychomotor objectives identified.

Declarative (What)

I. Fundamentals of Extrication
   A. Role of the EMT-F with ambulance endorsement
      1. Non-rescue EMS
         a. Administer necessary care to the patient before extrication and assure that the patient is removed in a way to minimize further injury.
         b. Patient care precedes extrication unless delayed movement would endanger life of the patient or rescuer.
         c. Working with others
            (1) The non-rescue EMS provider will need to work together with the providers of rescue.
            (2) The non-rescue EMT-F with ambulance endorsement should cooperate with the activities of the rescuers, and not allow their activities to interfere with patient care.
      2. Rescue EMS
         a. In some instances, the EMS providers are also the rescue providers.
         b. A chain of command should be established to assure patient care priorities.
            (1) Administer necessary care to the patient before extrication and assure that the patient is removed in a way to minimize further injury.
            (2) Patient care precedes extrication unless delayed movement would endanger life of the patient or rescuer.
II. Equipment
   A. Personal safety
   B. Patient safety - following the safety of the EMS responders, the next priority is the safety of the patient.

III. Getting to the Patient
   A. Simple access - does not require equipment.
   B. Complex access - requires use of tools, special equipment. These are separate programs that should be taken (Trench, High Angle, Basic Vehicle Rescue).
IV. Removing the Patient
   A. Maintain cervical spine stabilization.
   B. Complete initial assessment.
   C. Provide critical interventions.
   D. Immobilize spine securely.
      1. Short spine board
      2. Rapid extrication considerations
   E. Move the patient, not the immobilization device.
   F. Use sufficient personnel.
   G. Choose path of least resistance.
   H. Continue to protect patient from hazards.

Gaining access is intended to be an overview of the actions required to extricate a patient. It is not the intent of this lesson to teach the EMT-F with ambulance endorsement the techniques of extrication.

A number of special classes are available to teach such specialized knowledge and skills. This lesson should emphasize the safety and medical aspects of this process.

STUDENT ACTIVITIES

Kinesthetic (Do)

1. Students should practice removing patients from simulated crashed vehicles in the lab setting using short and long backboards.

INSTRUCTOR ACTIVITIES

Supervise student practice.
Reinforce student progress in cognitive, affective, and psychomotor domains.
Redirect students having difficulty with content.

MODULE 7 Operations (Lesson 7-3)

Overviews

COGNITIVE OBJECTIVES

At the completion of this lesson, the ambulance endorsement student will be able to:

7-3.1 Explain the EMT-F with ambulance endorsement's role during a call involving hazardous materials. (C-1)
7-3.2 Describe what the EMT-F with ambulance endorsement should do if there is reason to believe that there is a hazard at the scene. (C-1)
7-3.3 Describe the actions that an EMT-F with ambulance endorsement should take to ensure bystander safety. (C-1)
7-3.4 State the role the EMT-F with ambulance endorsement should perform until appropriately trained personnel arrive at the scene of a hazardous materials situation. (C-1)
7-3.5 Break down the steps to approaching a hazardous situation. (C-1)
7-3.6 Discuss the various environmental hazards that affect EMS. (C-1)
7-3.7 Describe the criteria for a multiple-casualty situation. (C-1)
7-3.8 Evaluate the role of the EMT-F with ambulance endorsement in the multiple-casualty situation. (C-3)
7-3.9 Summarize the components of basic triage. (C-1)
7-3.10 Define the role of the EMT-F with ambulance endorsement in a disaster operation. (C-1)
7-3.11 Describe basic concepts of incident management. (C-1)
7-3.12 Explain the methods for preventing contamination of self, equipment and facilities. (C-1)
7-3.13 Review the local mass casualty incident plan. (C-1)

AFFECTIVE OBJECTIVES

No affective objectives identified.

PSYCHOMOTOR OBJECTIVES

At the completion of this lesson, the Ambulance Endorsement student will be able to:

7-3.14 Given a scenario of a mass casualty incident, perform triage. (P-2)

Declarative (What)

I. Hazardous Materials
   A. Common problem
   B. Actual extent unknown
   C. Safety is the primary concern
   D. Approaching the scene
   E. Environmental hazards
   F. Resources
      1. CHEMTREC 800-424-9300
   G. National Fire Protection Association Haz Mat requirements for EMS providers
      1. NFPA 479

2. OSHA 1910.120

II. Incident Management Systems
   A. An incident management system has been developed to assist with the control, direction, and coordination of emergency response resources.
      1. It provides an orderly means of communication and information for decision-making.
      2. Interactions with other agencies are easier because of the single coordination.
   B. Structure - after an incident manager is determined, EMS sectors are established as needed.
      1. Extrication sector
      2. Treatment sector
      3. Transportation sector
      4. Staging sector
      5. Supply sector
      6. Triage sector
      7. Mobile command center
   C. Role of various individuals/organizations at the scene
      1. Individuals at the scene will be assigned to particular roles in one of the sectors.
      2. Upon arrival, the EMT-F with ambulance endorsement should report to the sector officer for specific duties.
      3. Once assigned a specific task, the EMT-F with ambulance endorsement should complete the task and report back to the sector officer.

III. Multiple Casualty Situations (MCS)
   A. Definition - an event that places a great demand on resources, be it equipment or personnel.
   B. Basic triage - sorting multiple casualties into priorities for emergency care or transportation to definitive care. Priorities are given in three levels.
      1. Highest priority
         a. Patients with severe medical problems
         b. Shock (hypoperfusion)
         c. Severe burns
      2. Second Priority
      3. Lowest priority\y
      4. Patient transport decisions are based on a variety of factors
   C. Procedures
      1. Prioritization
      2. Destination facilities
      3. Transportation resources

The process of sorting patients and determining the priority of their care is a difficult process. It should begin upon arrival at scene, following determination that the scene is safe.

MODULE 7 Operations (Lesson 7-4)

Evaluation: Operations

COGNITIVE OBJECTIVES
At the completion of this lesson, the ambulance endorsement student will be able to:
Demonstrate knowledge of the cognitive objectives of Lesson 7-1: Ambulance Operations
Demonstrate knowledge of the cognitive objectives of Lesson 7-2: Gaining Access
Demonstrate knowledge of the cognitive objectives of Lesson 7-3: Overviews

AFFECTIVE OBJECTIVES
At the completion of this lesson, the ambulance endorsement student will be able to:
Demonstrate knowledge of the affective objectives of Lesson 7-1: Ambulance Operations

PSYCHOMOTOR OBJECTIVES
At the completion of this lesson, the ambulance endorsement student will be able to:
Demonstrate proficiency in the psychomotor objectives of Lesson 7-3: Overviews

Procedural (How)

1. Written evaluation based on the cognitive and affective objectives of Lesson 7-1 through 7-3.
2. Practical evaluation stations based on the psychomotor objectives of Lesson 7-1 through 7-3.

INSTRUCTOR ACTIVITIES

Supervise student evaluation.
Reinforce student progress in cognitive, affective, and psychomotor domains.
Redirect students having difficulty with content.
Identify students and/or groups of students who are having difficulty with this subject content. If students continue to have difficulty demonstrating knowledge of the cognitive and affective objectives, or demonstrating proficiency in psychomotor skills, the students should be counseled, re-mediated and re-evaluated. If improvements in cognitive, affective or psychomotor skills are not achieved, consideration regarding the ability of the student to progress in the program should be taken into account.